specifics

DISCUSSING LANDSCAPE ARCHITECTURE

**Edited by
Christiane Sörensen
Karoline Liedtke**

jovis

European Conference of Landscape Architecture Schools

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Landscape architecture's fundamental task is to uncover and develop the specificity of a site. SPECIFICS emphasizes the differences of qualities of a location and invites to focus and concentrate on significant strategies for research and teaching in view of recent insights and global developments.

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INTRODUCTION BY THE PRESIDENT OF ECLAS

ECLAS, the European Council of Landscape Architecture Schools is the organization representing the interests of academic institutions that provide teaching programs and undertake research in the discipline. Founded as a loose organization at a conference in 1989, it grew to first become the European Conference of Landscape Architecture Schools, was renamed a council in 2000 to reflect its wider interests, and ultimately was registered legally as a membership organization in 2006. The main aims are "to foster and develop scholarship in landscape architecture throughout Europe by strengthening contacts and enriching the dialogue between members of Europe's landscape academic community and by representing the interests of this community within the wider European social and institutional context." The annual conference forms the basis of the council's activities, but a number of initiatives have also developed since the early days, the most important being the recently ended "LE:NOTRE Thematic Network. Project in Landscape Architecture." In 2006, ECLAS founded JoLA, the Journal of Landscape Architecture, as its vehicle for publishing high quality academic output. The conference is therefore the centerpiece of ECLAS's annual activities and represents the main opportunity for the academic community to get together and discuss research, critical practice, teaching, and so on. The conference program has evolved over time and is held each year in a different country by a member university. There are keynote papers by well-known and highly respected academics and practitioners, oral and poster sessions, parallel activities such as a doctoral colloquium for young academics and researchers, a meeting of heads of landscape schools and departments, and the executive committee meeting. There is also the annual General Assembly of ECLAS and the ECLAS awards ceremony, where outstanding achievements of ECLAS members are recognized and celebrated. The conference also includes field visits and excursions, and of course a conference dinner.

Each school hosting the conference identifies a theme and set of subthemes that form the basis of the conference. Calls for abstracts are followed by reviews and the selection of a full program of oral presentations, with approximately four parallel sessions being held. Papers are then written and published in the proceedings. At the Hamburg conference an innovation was introduced—a PechaKucha session—where contributors could offer something more than a poster, but less than a standard oral presentation. These were often a means for younger researchers to present works in progress and obtain valuable feedback from more experienced colleagues.

For the proceedings to be accurately described as "proceedings," they should proceed from the conference and reflect not just what people wrote in the papers accompanying their presentations, but also the flavor of the discussions that took place in the sessions, as well as the keynote papers which are usually not produced beforehand, and the summaries, if any, made by session chairs and others. If a conference is to help move forward the discipline or subject area that serves as the program theme, then the ensuing reflections are highly significant. Hence, it is advisable to allow some time to pass before producing a volume that truly reflects the spirit of a conference and captures more than the sum of the papers delivered.

The ECLAS Conference held in Hamburg in September 2013 was memorable for many reasons. The location, St. Katharine's Church, was an outstanding venue. It was an inspired choice for being a fallback location, after it became clear that the original planned venue in the new HafenCity University Hamburg campus would not be completed in time. Everything could be found under one roof, the pastor made us very welcome and joined in the event himself. We got to hear the amazing organ, a replica of one on which Bach had played, and everyone could easily mix, meet, and network.

St. Katharine's Church sites on the edge of the HafenCity, across the canal. We were also able to visit and experience the renaissance of the old port area, as well as see the building exhibition and garden show, taking place in Hamburg at the same time. These possibilities added considerable value to the conference.

At a reception in the city hall held at the invitation of Dr. Dorothee Stapelfeldt, the Second Mayor and Senator for Science and Research of the Free and Hanseatic City of Hamburg, we were able to hear more of the ambitions and aims of the HafenCity project from key people involved in taking it forward.

Finally, I would like to thank Christiane and Karoline (Jane and Karo) for the hard work they put in organizing and running the conference, as well as taking the extra time to produce these excellent proceedings. It is an aim of ECLAS to continually improve the quality of the conference and this example helped to do so.

Simon Bell
President of ECLAS

THE EXPERIMENT "SPECIFICS"

Many questions arose when HafenCity University Hamburg was chosen as the venue for the ECLAS Conference 2013. ECLAS provides a basic framework and structure for every conference, which allows the host university to develop it further and add specific details. We were fascinated by that recurring academic ritual of shaping an event in various fashions according to each location and university. What does it mean for the field of landscape architecture if the HCU hosts and organizes such a demanding conference and exhibits the global professional discipline? And how can we best represent the research profile of a still very young university— a university "under construction"—founded just in 2006? What should be the title? What should be the main focus of the conference program? Or as phrased by Simon Bell: "What spirit can we instill in the conference?"

At HafenCity University, landscape architecture is particularly involved at the interface of architecture, city planning, and civil engineering, which suggests the term interdisciplinary as a possible title for the conference. Hence, the conference program should of course attract a wide range of disciplines. We invited colleagues from various HafenCity University disciplines to explain and define the role of the landscape within their degree programs. In an ongoing process of thought and discussion, the concern gradually shifted to analyzing the differences between disciplines and working patterns, and focusing on individual profiles in order to gain a better understanding of our interdisciplinary discourse. This process led us to the opposite term and finally to the title, SPECIFICS. Through this process, we realized that defining the specifics is, in fact, the basic condition for interdisciplinary practice. The need subsequently arose to define the task and role of landscape architecture as follows: a fundamental task of landscape architecture is to examine the typical characteristics and potential of a place, to reveal its genius loci, and thus extract the specificity of the location. The shaping of cultural landscapes owes much to regional experiences and individual interpretations alike.

During the conference, guests were introduced to the specificities of Hamburg as a subject of consideration. Under the title, "Specifics in One Place," Jürgen Bruns Berentelg, director of the HafenCity GmbH and sponsor of the conference, invited internationally renowned landscape architects, who distinguish themselves as being responsible for HafenCity's open spaces, to a critical discourse on the nature of their work. This resulted in a keynote contribution on the prelocation of HafenCity University, now within the new HafenCity Hamburg urban district, to that of the former port. But can the title SPECIFICS be applied to the question of research profiles and the methods that accompany them? Research and teaching approaches shape the thinking of future generations of landscape and environmental planners. The immediate task is to emphasize differences of quality and concentrate on significant strategies for research and teaching against the backdrop of globalization. During another intensive discussion on various research perspectives at the HCU, we developed together with our neighboring disciplines the following subtitles for the sessions: "Nature Happened Yesterday," "Who Owns the Landscape," "Best Practice Landscape Architecture," "Landscape and Structures," "Event and Conversion"

The call for papers triggered an intense process of evaluating the 268 submitted abstracts and selecting suitable contributions for the final shaping of the program. Selected presenters—all highly respected academics in different fields—were

involved in the organization and selection process from the early developmental phases of the sessions. They were responsible for the arrangement and configuration of their panels. The moderators' final assessments and comments on the sessions in these proceedings enriched and revised the overall perspective beyond the respective views of each individual presenter. We have allowed ourselves curatorial freedom and opted for a personalized selection process based on a preceding anonymous review procedure. In her contribution, Kelly Shannon excellently presented the scientific practice of such methods but moreover analyzed the weaknesses of amalgamation.

We were also particularly interested the marginal areas, the interfaces between art and the sciences. Landscape architecture is a relatively new profession in research. It is not possible to rely on traditional methods and is often reliant on the methods used by other sciences (humanities, and so on). Therefore, it was our concern to include the specific practice of landscape architecture in the conference as a subject of reflection, within the session of best practice landscape architecture. Design theory has been pointed out as an original means of expression and of landscape architecture. To what extent can different design methods contribute to the construction of a basis for theory? The question as to whether design itself is research was an issue of controversy. This, and other discourses, is analyzed in this publication.

Opening with the film *Nightfall* and the parallel lecture by artist and researcher James Benning created a wonderful prelude to the spirit of the conference. The film *Nightfall* opened the conference entitled SPECIFICS with a call to reveal, to bring forth nature in its unending (sustainable) existence. In his lecture on the methodology of his practice, James Benning addressed landscape architecture as an ontological discipline. What could we learn from the widespread international network of specific experiences and how can we draw inspiration from them? Bringing together all the specific cultures in landscape architecture led to a true, overall understanding of the similarities and differences in our professional practices.We look back on an exciting time and are impressed by the richness of content. It documents the current discussions in landscape architecture in the form of the Proceedings of the Conference of 2013.

Christiane Sörensen, Karoline Liedtke
Editors

"SPECIFICS" AS FORUM FOR INTERDISCIPLINARY LANDSCAPE RESEARCH

SPECIFICS was an exciting opportunity and challenge for the HafenCity University Hamburg (HCU). As a still very young university, we felt honored and privileged to host the 2013 annual conference of the European Council of Landscape Architecture Schools (ECLAS). Christiane Sörensen and her team of landscape architects at the HCU were able to host and organize an inspiring program for the conference, which attracted researchers and practitioners from a wide range of disciplines. Not only planners and designers, but also social scientists, engineers, artists, and representatives from the humanities gathered in Hamburg to discuss vital and prevailing topics of landscape architecture. To have the international community of leading scholars and professionals in this field as guests at our university was a unique experience and a chance for fundamental debates about landscape architecture and its intertwined relation to other areas of research. I am, therefore, glad that by publishing the papers of the conference in this volume, readers will have the opportunity to relive major discussions and intellectual debates of SPECIFICS.

The notion of landscape is in itself already interdisciplinary. It is omnipresent in planning, in cultural aspects of metropolitan development, as well as urban design. Therefore, the HCU appears to be not only a suitable, but also a demanding venue for the annual ECLAS Conference. As a focused university of the built environment, interdisciplinary teaching and research between design, technology, culture, society, the arts, ecology, and economics are everyday challenges at the HCU. During the time of the conference, our researchers had many chances to put forward their interdisciplinary approaches and questions of the role of landscape within the manifold debates about the built environment and urban society. The new ideas, methods, and hypotheses presented in response by specialists of landscape architecture and planning from around the world will be a lasting benefit for our university. Therefore, the contributions of this volume show, once more, in which ways the analysis of urban and regional landscapes are at the heart of every institution of the planned and built environment. For a conference dedicated to specifics in landscape architecture, we believe that choosing Hamburg as the conference's location had a lot to offer for the participants of the conference. The HCU is a significant component of the emerging HafenCity district, currently Europe's largest Inner City development project. Right next to HCU, Lohsepark, envisaged as the "Central Park" of HafenCity, will be built by 2015. Being a vital part of such a large project with a development time that will last for another decade proves that institutions of higher education such as the HCU can play a major role in urban revitalization. At the same time, as a university, Hamburg's HafenCity gave us the possibility of being in the middle of a laboratory, of an urban experiment ready to be explored. While SPECIFICS was taking place in Hamburg, two other experiments were held: the International Building Exhibition, and the International Garden Show, which also raised new questions, offered new approaches, and presented new solutions for urban development. All this added to the intellectual uniqueness of the conference in Hamburg, which was made possible through the support of the Deutsche Forschungsgemeinschaft, HafenCity Hamburg GmbH, Hamburg's Architectural Association, and others.

Who can take up the current challenges to generate new ideas for exploring urban landscapes if not young researchers? Therefore, I was especially grateful to be asked to introduce the PhD colloquium "Creating Knowledge" during the ECLAS Conference. Hans-Jörg Rheinberger, director of the Max Planck Institute for the History of Science, once said: "When you do research, you haven't discovered yet what you don't know." This quote is a reference to the well known (and shortened) ancient quote "I know that I know nothing," but it transforms the thought into a double negation making the task of the researcher even more complex. Rheinberger's quote tells us something about the special condition of research: a serious researcher is in the dark and hopes to discover something that nobody has found before on his or her expedition. Research, therefore, should raise types of questions which do not predict what they will discover. As a researcher, one needs to bear the state of irritation, disturbance, at times also boredom, indirect perception, or insight. Allowing uncertainties is necessary to find the right questions of research. In this sense the conference motivated young researchers to question and challenge their presumptions, causing a helpful "PhD-confusion." SPECIFICS in this way stimulated a new generation of researchers to find the right questions for many years to come.

Gesa Ziemer
Vice President of Research, HafenCity University Hamburg

THE PARADOXES OF PEER-REVIEW (FOR LANDSCAPE ARCHITECTURE)

Since the eighteenth century, methods for the assessment of science have been instilled through official societies and academies, initiated with the Royal Society of Edinburgh in 1732. Today's peer review process is a direct descendent of its earliest iteration developed for the hard and social sciences, whereby an impartial review of experts in the same field (peers) serve an evaluative or gatekeeping role towards claims to knowledge, old and new, and for "possible errors of fact or inconsistencies of argument" (Ziman 1984 quoted in Bedeian 2004,198) before publication. The now conventional format for modern science—introduction, method, results, discussion—repeated in countless "scientific" papers in all academic disciplines and followed by rote, is a supposedly rational sequence of activities resulting in new knowledge. "Peer review … is a linchpin of academic life" (Eisenhart 2002). The process controls access to funding, is utilized by universities to make decisions about hiring, promotion, and tenure, and to assess the quality of departments and programs.

Yet, for decades, the peer review process has been held under increasing scrutiny and has raised concern regarding bias, fairness, unnecessary delay, and general ineffectiveness. Moreover, critics contend that review panels tend to comply with conventional standards, thus disqualifying innovative and unorthodox scholarship, as well as young researchers and researchers with diverse perspectives (Bedeian 2004; Eisenhat 2002; Suls and Martin 2009; Trafimow and Rice 2006). Inevitably, peer review panels are vulnerable—to a certain degree—to nepotism and strategic maneuvering, depending on the contexts in which the process occurs.

In the arena of the built environment, there are further complexities and concerns regarding peer review. First, there remains the continual transition from professions to disciplines; the shift from professional diktat towards cerebral endeavor has been evolving worldwide. According to the Swiss architect Bernard Tschumi, research is the mechanism through which professions advance and improve their techniques, and escape the tendency to reflect the prevalent mode of production (quoted in Milburn et al. 2003, 126).

The transitory process is artificially hastened by the "democratization of education" and leveling of the educational playing field (evidenced in Europe by the Bologna Process), with the consequence that more research must be produced by faculty and doctoral students alike. Second, in landscape architecture and architecture, the perceived dichotomy between research and design has led to tremendous debates concerning academic scholarship and research assessment (Benson 1998). Knowledge production in landscape architecture, as in architecture, is generally a complex interplay of socialcultural, historical, economical, and even technological components, rather than the product of an absolute truth, as in the sciences. And, at the same time, it has been well-documented that, historically, there has not been a deep-rooted research culture in landscape architecture; it is predominantly an emerging phenomenon. The field's ongoing struggle to establish design as a viable form of research comes from a longstanding battle to reconcile forms of traditional knowledge with requirements of rigorous scholarly research (Benson 1998; Milburn et al. 2003).

Landscape architecture clearly needs research, and a double-blind peer review process guarantees a certain degree of impartiality, validity, and reliability. At the same time, there are numerous faults in the peer review system that can be improved. However, if its basic principles are followed, then it appears to be the best process academia has at this point to "democratically" assess research. Yet, landscape architecture (like architecture and other creative fields) can perhaps do better and create new frameworks for research and papers in the applied arts—particularly, for instance, ones that are distinct from science's "introduction, method, results, discussion." Landscape architects can more convincingly become reflective practitioners, provide engaged critique, and not simply attempt to mirror the science canon. ECLAS conferences are the perfect test beds.

Kelly Shannon
JoLA Editorial Team

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NIGHTFALL

"Nightfall … is a ninety-seven-minute study of changing light, from daytime to complete darkness. It is a portrait of solitude. Nothing happens—no wind, no movement, just changing light."

JAMES BENNING

IN FACT NATURE
THE FILMS OF JAMES BENNING: DECIPHERING THE LAND

In his keynote address, the artist James Benning reveals himself also as a researcher, as someone who is searching for the foundation of his art. In an abstract language he leads us to a basic understanding of his work. His text is a mathematical metaphor for his oeuvre.

James Benning bases his method—the Greek word for the way one's work progresses—on a string of instants, of infinitely short time intervals that are lined up to constitute the axis of time. As one often says, "time has passed in an instant."

CHRISTIANE SÖRENSEN

Since 2006 Christiane Sörensen has held a chair for landscape architecture at the HafenCity University Hamburg. From 1989 to 2005 she was a professor at the University of Fine Arts, Hamburg. Here she founded the research and teaching lab "Topographic Thinking and Designing" in 2003. The lab is a platform for interaction between artistic and space-related disciplines in landscape studies and environmental issues. In 2003 and 2004 she held a Lady Davis Professorship at the Technion-Israel in Haifa. In addition to her academic position, Christiane Sörensen has her own landscape architecture office. Many of her projects are the result of early successful competitions. In 2014 she was responsible for organizing and curating the ECLAS Conference in Hamburg.

In Benning's work, landscape serves as a framework for experiencing the flow of time, but also for the durability beyond the limitations of a time segment.

Nightfall represents a real experience of time in the staging of a Californian forest. In only one take, it shows the forest as day becomes night—a systematic documentation of the flow, the essence of time, as night is being made. We witness how sunny spots turn pale white and then to total darkness.

The film screening is a meditative tour de force due to the highly focused attention demanded of the viewer. We move between the opposite poles of meditative contemplation and a strange agitation brought on by intensively staring into the picture that is fully devoid of additional effects. Only the humming of insects marks a physical presence.

Nothing seems to happen, but in fact there are many changes. The relationship between light and dark changes. The memories of one moment must be kept open for the next one. We are asked to give ourselves over to this process of guided attention and perception. The spectator is left to him or herself and becomes vulnerable and open to the unfolding of the pictures. We gradually let go of the pressure to discover a deeper sense. The conference participants experience an unexpected reality after a long journey, which was certainly full of certain expectations of the conference. They become part of a common process of "arrival."

The term landscape, in German "Land-*schaft*," implies the *creation* of the land, and thereby, a common process of taking possession of the territory. Landscape is always a common concept. The film by James Benning thus embodies, at the opening of the conference, the collective appropriation of the topic "landscape." *Nightfall* requires a naive attention to pictures and sounds. It does not include the sentimental aesthetics so common in European romanticism, generated by an image of dusk that has multiple encodings.

In his lecture "All of Life is Memory," Benning presents a pragmatic scheme for his visual acoustic expedition through the American landscape. He simplifies the complex perceptions of landscape by reducing our memories to a projection on the time-based axis—"in fact, memory." This radical method of working translates the modern understanding of landscape into film. This concept captures reality without evoking it. In contrast to the European tradition in art, memory

here is free of a subjective charge, and can be understood as the pure experience of time.

Paul Cézanne, a precursor to modernity, painted the St. Victoire mountain in Provence more than eighty times and, in the course of this artistic concentration on this multifaceted object in the southern landscape, reduced the topos mountain to a triangle; meaning the mountain is detached from its landscape and becomes finally an aesthetic construction. This step is what made Cézanne the father of abstract painting.

Benning's *Nightfall* was filmed in a forest high up in California's Sierra Nevada mountains. The precise choice of location was the result of the author's lifelong experience. Omitting all distracting side effects could only have been done by someone with proven and highly developed artistic and technical skills.

For the viewer, the forest remains vague, seemingly without a precise localization. Like in Cézanne's paintings, we encounter an artistic concentration that overcomes the weight of a fixed location. This "no-place," which leads to a true understanding of the temporal processes in nature, is radically different from the globalized, completely unspecific but fixed "non-place," as described by Marc Augé in his renowned *Non-Places*: *Introduction* to an *Anthropology* of *Supermodernity* (1995).

The film *Nightfall* at the beginning of the conference entitled SPECIFICS represents the emergence of nature in anticipation of its own existence. Making nature visible is an active and creative process, and precisely the task and challenge of the landscape architect. *Nightfall* equally stands for generating thoughts and concepts of nature, for deciphering landscape, and for revealing its properties, in order to concisely establish the true essence of nature: in fact, nature.

NIGHTFALL, USA 2011, 97 min.   James Benning, Film Director

ALL OF LIFE IS MEMORY

Mathematicians represent the real numbers on a straight line and every real number has a particular place on that line. If we look at the set of counting numbers, $C = \{1, 2, 3 \cdots + \infty\}$, we see that they are evenly spaced (one unit apart) and go on forever, that is, they are infinite.

The number zero wasn't accepted as a number until the twelfth century. The church had objected to a symbol representing nothing. Once zero was in place, the natural numbers, $N = \{0, 1, 2, 3 \cdots +\infty\}$, were born. The unit distance could now be defined as the distance from zero to one.

Adding the negative counting number gave the set of integers, $I = \{-\infty \cdots -3, -2, -1, 0, 1, 2, 3 \cdots +\infty\}$. Note: since the integers can be counted (that is, put in one to one correspondence with the counting numbers) both sets are of the same size, even though the counting numbers are a subset of the integers. It is easy to count the integers starting with *0*, then *1*, then *-1*, then *2*, then *-2*, and so on.

Between any two integers there is an infinite amount of fractions; for example, between *0* and *1* there is ½, and ¼, and ⅛, and ¹⁄₁₆, etc. This can go on forever. Yet, there is a way to count all of the fractions, just queue them up by giving them a place in the queue like an airline does when it calls first class, business class, group 1, group *2*, group *3*, and so on. Each fraction's group number is simply determined by adding its numerator to its denominator, that is, ½ is in group *3*, ⅞ is in group *15*, ³⁄₂₉ is in group *32*, and so on. Like the airplane queue, each of the groups will be finite in size and can be called in order, making it possible to count the set of all fractions even though the number of groups of fractions is infinite (unlike the airplane example). The set of all fractions is known as the rational numbers, $R = \{\, ^p\!/_q$ where p and q are both integers, $q \neq 0$, and p and q are not both even}, At this point one could think that all of the points on the real number line have been defined, that is, taken up by the rational numbers, yet there are more points on the line that have not yet been named than have been named. This is because even a larger set of numbers exist that can't be expressed as fractions, they can only be repressed as decimals whose digits never repeat and go on forever.

π = 3.14159265358979323846264338327950288419716939937510582097494445 …, the ratio of a circle's circumference to its diameter, is perhaps the most famous example of these kinds of numbers. Since *π*'s decimals go on forever, its value can only be stated as between some interval, the more digits considered, the smaller that interval, converging only when an infinite number of decimals are reached, which of course is never realized. These kinds of numbers form the set of irrational numbers, *R'*. It is easily proven that the irrational numbers cannot be ordered and therefore cannot be counted. Simply assume a full list of the irrational numbers exists. One can then show that an irrational number can be found that is not in this list by

JAMES BENNING

"I was born in Milwaukee, Wisconsin, during World War II in a German working class community that sent its sons to fight against their cousins. My father worked on the assembly line for a heavy industry corporation that was then building landing gear for the U.S. military. Later he became a self-taught building designer. I played baseball for the first 20 years of my life, receiving a degree in mathematics while playing on a baseball scholarship. I dropped out of graduate school to deny my military deferment (my friends were dying in Viet Nam) and worked with migrant workers in Colorado teaching their children how to read and write. Later I helped start a commodities food program that fed the poor in the Missouri Ozarks. At the age of 33 I received an MFA from the University of Wisconsin where I studied with David Bordwell. For the next four years, I taught filmmaking at Northwestern University, University of Wisconsin, University of Oklahoma, and the University of California San Diego. In 1980 I moved to lower Manhattan, making films with the aid of grant and German Television money. After eight years in New York I moved to Val Verde, California, where I currently reside, teaching film/video at California Institute of the Arts. In the past twenty-five years I have completed fourteen feature length films that have shown in many different venues across the world." (Benning, CalArts, California Institute of the Arts)

creating a irrational number whose first digit is different from the first digit of the first number in the list, and its second digit is different from the second digit of the second number in the list, and its third digit is different from the third digit of the third number in the list, and so on. Therefore no complete list of irrational numbers can ever be achieved, making them not countable. They are in fact, a larger infinite set than the infinite set of rational numbers that can be counted. This is known as the second order of infinity. There is a third order of infinity, which is even larger. It is the set of all curves. For me, this is a rather startling notion that infinite sets can vary in size. A fourth order of infinity is yet to be found.

Finally, all of the points on the real number line have been defined. Any point on the line is either a rational number or an irrational number, but not both; they are mutually exclusive. To accommodate these two infinite sets, *R* and *R'*, a point on the real number line has no dimension, which is the main point of this talk. Now consider the real number line as a time line, where zero is the present. The positive numbers represent the future, and the negative numbers represent the past. As of yet, we cannot move along the time line, that is, travel in time. We are stuck at zero, but zero has no dimension, meaning the present doesn't actually exist, as soon as the future becomes the present, it becomes the past, instantaneously. All of life can only be understood through memory, in fact all of life is memory. Consider a car passing with its directional light blinking as it passes. At the present, the light is either on or off, it isn't blinking. We only think it is blinking because we remember that it was off when it is on, and that is was on when it is off. In fact to sense that the car was moving at all can only be perceive through memory. At any moment in the present the car is located at one particular spot. It only moves through time, and there is no time at the present. Perhaps *talking* itself is the best example of this. By the time I get to the end of any sentence the first word of that sentence is easily understood to be in the past, in fact any word that you hear me utter is already in the past, not because the speed of sound is slow (although that does add to it), but because the present has no dimension. So how do we make sense of anything? It's always from memory. What has just occurred is judged from what we've experienced in the past, along with what we've read, been taught, or told. But this should never be a one-way street. Even though new experiences can only be understood through memory, the past should also always be re-evaluated from the present, otherwise we will only reinforce our own prejudices, be them right or wrong …

FILMOGRAPHY:

(1971) did you ever hear that cricket sound (1972) Time and a Half (1972) Art Hist. 101 (1972) ode to Muzak (1973) Hon- eylane (1973) Michigan Avenue (1974) i-94 (1974) 81/2 x 11 (1975) The United States of America (1975) Saturday Night (1975) 9-1-75 (1975) 3 minutes on the dangers of film recording (1976) Chicago Loop (1976) A to B (1976) 11 x 14 (1977) One Way Boogie Woogie (1979) Grand Opera. An Historical Romance (1981) Him and Me (1984) American Dreams (lost and found) (1985) O Panama (1986) Landscape Suicide (1988) Used Innocence (1991) North on Evers (1995) Desert (1997) Four Corners (1998) UTOPIA (1999) El Valley Centro (2000) Los (2001) Sogobi (2004) 13 LAKES (2004) TEN SKIES (1977/2004) One Way Boogie Woogie/27 Years Later (2007) casting a glance (2007) RR (2009) Ruhr (2010) John Krieg Exiting the Falk Corporation in 1971 (2010) Pig Iron (2010) Faces (2011) Twenty Cigarettes (2011) Nightfall (2011) Two Cabins (2011) small roads (2012) Easy Rider (2012) Stemple Pass (2013) BNSF

LANDSCAPE AT WORK
SOME THOUGHTS ON JAMES BENNING'S FILM NIGHTFALL

Over more than two decades, the artist and filmmaker James Benning has developed an enormously rich body of work on the contemporary landscape in the United States. Films like the *California Trilogy* or *RR* uncover how today even majestic landscapes are drawn into global chains of production and distribution. In such a constellation it becomes clear how naive and actually unaware of the interplay of natural and societal processes our cultural stereotypes of idyllic landscape and its purity actually are.

In this impressive body of challenging films on landscape his recent work *Nightfall* is the most daring one. In this ninety-seven minute recording of a dusk, Benning applies an extreme minimalism. *Nightfall* has a completly static framing and a real-time unfolding taken in a forest situated 8,000 feet high in Sierra Nevada, California. There is no human or animal presence visible but, as Michael Pattison has put it in his review of the film, the "inevitable and natural process" of day turning into night.

Nightfall does not rely on any of the typical codings of landscape. It neither deals with dimensions or graininess, nor conflictive readings or banal functions. Questions like, "What is the exact species of the trees shown in the film?" or "Where is the place James Benning took his pictures?" are of no relevance. Instead, *Nightfall* forces the spectator to take a second and even a third look at common interpretations of nature. The rigidly structured frame of trees refrains from being a foil for classical discourses. But as the movie proceeds, our professional understanding and our culturally inherited expectations of nature and landscape are being put to the test: *Nightfall* is not a film about landscape, it shows landscape at work. Let me quickly illustrate how deep and fundamental the difference between these two approaches actually is. Eric Rohmer's tender and moving film *L'heure bleue* circles around the swift moments when night is turning into day. It captures the transition between these seconds of perfect silence and encompassing darkness on the one hand and the shy singing of the first birds on the other—soon followed by a huge orchestra of voices and sounds. Rohmer's narrative is that of the beauty of life and the wonders of creation. The fundamental experience of the morning breaking somewhere in the French countryside reassures the characters of their existence and their mystical embeddedness. Like with the great French landscape painters of the nineteenth century, Rohmer's depiction of landscape in time is driven by the romantic concept of nature as the true source of introspection and self-awareness.

Nightfall does not allow for such shortcuts from nature to culture. On the contrary: its utter clarity and thorough awareness are provocative as it forces us to experience and thereby accept the beauty of nature as a relentless and stubborn process. The factual regime of nature knows no interactions with the realm of man, it follows strictly its own agenda.

To put it differently: James Benning's *Nightfall* sheds light on the fundamental gap between the realm of nature and the cultural readings of it. The physical time

ANGELUS EISINGER
is an urban historian and urbanist, held the chair for History and Culture of the Metropolis at HafenCity University Hamburg. With his practice, Perimeter Stadt, he is also involved in consulting and conceptual work in urban planning competitions and studies. Since April 2013 Angelus Eisinger is the director of the RZU—Regional Planning for Zürich and the Surrounding Area.

nature demands to unravel the transition from day to night does not meet with our cultural codings of it. *Nightfall* invites a sobering view on the natural drivers of landscape transformation. As, minute by minute, the screen gets darker and darker, our culturally inherited expectations and notions of nature are being challenged. In true effigy of our fixed image of the beautiful late afternoon, nothing seems to happen in the first thirty minutes. Then, step by step with light as the only variable changing colors, surfaces and sounds will start to alter. The radical empiricism of the setting lays nature bare. The artistically produced experience of nature at work is in no way redeemed by offers of interpretation. Instead, this uneasy objectivity of James Benning's approach invites his audience to a somewhat painful question and answer while the darkening is taking place. The spectators' minds start wandering over the minutes and hours the film takes to unravel. Eventually, you will be starting to contest your ideas about landscape and nature. And by that you will become aware of their myths and their shortcomings.

It is my firm conviction that if we want to overcome the destructive forces digging deep into our urban landscapes, we will have to develop a novel understanding of the interplay between landscape and its societal roles. This understanding will have to start from the willingness to arbitrate between the fundamentally different demands and logics of the natural realm and the various urban systems. But what are the appropriate readings and codes for this contemporary landscape? James Benning's rigorous film provides no answers. Instead, it points to the real reality of landscape.

NATURE HAPPENED YESTERDAY

Trial Reflection on the Specific Role of Landscape Architecture

The process of taming nature is still progressing, and research has probed deeply into civilization's most distant corners. The research methods used in the natural sciences, especially the life sciences, serve to increasingly relativize the dividing line between humans and nature. More than other disciplines, landscape architecture has always been concerned with the link between scientific and artistic practice. Its role is to understand nature in all her complexity and to make visible our interactive embeddedness in nature.

What are the aftereffects of events, such as the nuclear meltdown in Fukushima or the oil spill in the Gulf of Mexico? Examining global issues regarding the environment demands a level of sensitivity that transcends political borders; it also calls for a way in which to make joint action possible.

Sometimes familiar cultural landscapes are subject to irreversible change. Now that the relationship between culture/technology and nature has become fragile, how will the profession continue to best fulfill the task of reconciling them? The consequences of these developments require a new basic understanding of the sphere in which landscape architecture operates. Therefore, it is worthwhile to reach an agreement on certain specific, necessary research and teaching topics:

- What value is attached to nature in societies with constantly changing value systems?

Nature as an expression of yearning:

- How are perceptions of "nature" changing?
- How close to nature are we, how far alienated?
- What future-oriented aesthetic practices are needed?
- Are people waking up to the environment?

Nature as differentiated from the concept of culture:

- Does this differentiation still make sense?
- What visions guide us when we seek to preserve and cherish natural and cultural landscapes?
- Are trends towards a new understanding of landscape apparent?
- What approaches to teaching exist to convey an understanding of nature to the future generation of landscape architects and planners?

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NATURE HAPPENED YESTERDAY
NATURE VERSUS CULTURE

COMMENT BY MICHAELA OTT, BERLIN/HAMBURG

The question of what we imagine when we speak of nature today can no longer be separated from the question of what we understand of culture. Nature has been culturalized through every means of human and technical intervention. It has been shaped, or at least modified, by humans to such an extent, that it is almost impossible to know what a specific part of nature might have looked like originally. Moreover, philosophers contest the existence of a pregiven or objective entity. It seems evident that nature cannot be discussed as an entity separate from our own personal perception, interests, technological conditions, or the cultural and sociopolitical context. We ourselves are an intrinsic part of the "matter" in question and, hence, must consider ourselves observers observing ourselves on a second level.

MICHAELA OTT
is professor of aesthetic theories at the University of Fine Arts Hamburg. She is a philosopher, film academic, and translator. Her main research interests are post-structuralist philosophy, film theory, philosophical and political aesthetics, and cultural theories of space and affection.

This is why phenomenological philosophy uses the term "chiasm" (Martin Heidegger), in order to describe the relationship between natural and cultural phenomena, between intermingled, natural-cultural "assemblages." Epistemologist Bruno Latour, who uses this latter term in his famous Actor-Network Theory, demonstrates that even scientific experiments are never independent from the specific or overall cultural and political context; their results are conditioned by quantities of non-scientific elements and processes that must be considered when attempts are made to evaluate their epistemological relevance. Latour therefore contests the traditional separation of natural sciences and humanities, and asks for a more demanding and encompassing "physical sociology." In the new discipline favored by him, natural and social data are to be merged and considered equal, in order to conceive of complex vital spheres for human and non-human beings. Of course, Latour is well aware that the design of such vital spheres always depends on human choices and requires long-lasting processes of negotiation. All he asks is that scientists reflect better on the political framing and the temporal conditions of their experiments; they should know that they involuntarily put together different, and often incompatible elements, and constitute objects that are much more complex than imagined or intended. The most import thing for Latour is to uncover the interconnectedness of natural and social processes, and to question the physical and spatial context of scientific research in general.

We are ever more aware of how nature is deeply modified by humans and "strikes back" in the form of climate change or global warming. Therefore, we feel an increased obligation to integrate an ever-growing variety of both social and natural parameters into ecological urban planning schemes, and to meticulously design the interactions and metamorphoses between the two spheres. In order to more optimally design a human environment, we know that we have to also integrate atmospheric and affective moments into landscape architecture. Hence, the

ECLAS Conference asked contributors to examine the characteristics and potentials of places, their relationships with other places, and their contexts. It challenged several panels with the provocative title "Nature Happened Yesterday."

The panel "Nature Versus Culture" struggled in particular with the question of whether new concepts existed to describe the contemporary relationship between nature and culture. Thomas Hauck (TU Munich) in this sense searches for a new paradigm to describe the social relationship with nature. He eventually rejects the notion that such a new paradigm exists, and states instead that the old notion of "landscape" simply reappears dressed in technomorphic clothing. He also complains that "Green infrastructure" is little more than a slogan used to reanimate the old holistic concept of nature. He believes that engineering science ecology hampers the use of innovative ecological approaches and ideas, which could be applied in designing human-natural systems.

Ingrid Sarlöv Herlin (Swedish University of Agricultural Sciences, Alnarp) discusses European landscape conventions and criticizes the fact that landscape often either falls through the gaps of different policy spheres, or is kept in one single policy corner requiring expert safeguarding, rather than being seen as a robust organism for social construction.

Tiago Torres-Campos (University of Edinburgh) in his opening statement tries to provoke the notion that the human capacity to move freely in space and time is much more limited than generally believed. Unfortunately, he limited the concept of "timescapes" to the notion of speed, meaning, the faster one crosses a landscape area the less can be observed. He did not reflect on the complexity of those time-related parameters that enter into landscape planning, or on the temporal appropriation of landscape by the user, or on its historical changes.

Sandra Costa in her essay, "Walking Narratives: Interacting between Urban Nature and the Self-World," elaborates on her research of the practical landscape experience and on questions of how it is perceived and sensed by individuals. Expanding on interviews with different subjects, she shows that all of them used the park in a different way according to their own psychological constitution, the timing of their walks, and the stories they constructed through their specific practices.

Last but not least, Andrea Cejka demonstrates, using the convincing example of a reconstructed former sugar factory in Löbau, Germany, that the landscape architect must appropriate the place by means of "close examination": digging into archives and sketching the site from different perspectives, rather than merely using photographs. Such complex research can result in a critical reconstruction of the precarious identity of a site with the help of ecological and sustainable design.

DESIGNING NATURE AS INFRASTRUCTURE—A PROFESSION LOOKING FOR NEW METAPHORS FOR ITS RELATION WITH NATURE

THOMAS HAUCK
Technical University of Munich, Department of Landscape Architecture and Regional Open Space, chair of Landscape Architecture and Public Space, Germany
thomas.hauck@wzw.tum.de

Thomas Hauck is a landscape architect and artist. He studied landscape architecture at the University of Hanover and the Edinburgh College of Art. He founded the interdisciplinary artists' group Club Real. He is a research and teaching assistant professor with the Department of Landscape Architecture and Public Space at the Technical University in Munich since 2005. Own practice (Polinna Hauck Landscape + Urbanism) together with Cordelia Polinna in Berlin since 2007. He lives in Berlin.

DANIEL CZECHOWSKI
Technical University of Munich, Department of Landscape Architecture and Regional Open Space, Germany
daniel.czechowski@tum.de

Daniel Czechowski, born 1974, landscape architect, studied landscape architecture at the Technical University of Berlin. Since 2008 he is a scientific assistant at the Department of Landscape Architecture and Regional Open Space at the Technical University in Munich. He lives in Munich.

GEORG HAUSLADEN
Technical University of Munich, Department of Landscape Architecture and Regional Open Space, Germany
georg.hausladen@mytum.de

Georg Hausladen studied biology with focus on vegetation ecology, theory of ecology at the Technical University of Munich. Since 2010 he is an assistant lecturer at the Department of Landscape Architecture and Regional Open Space at the Technical University of Munich. He is doing his doctoral thesis on theory of ecological engineering since 2011 and working freelance as a biologist in Munich since 2010. He lives in Munich.

green infrastructure / ecosystem services / landscape machine / landscape infrastructure / landscape-functionalism

RENAISSANCE OF GREEN INFRASTRUCTURE

The past years have witnessed a renaissance in the concept of green infrastructures as a widely used planning concept. At the same time, a recent discourse in landscape architecture and planning has also produced some new functionalistic terms related to urban green and landscape.

We will compare, as examples of this new landscape-functionalism, the concepts of "landscape as infrastructure" (Belanger 2009/2012) and of "landscape machines" (Roncken et al. 2011) with the well-established concept of "green infrastructure" to find out why this successful concept is obviously not satisfying for some planners and architects. Otherwise, such a multitude of alternative concepts would not emerge. Furthermore, the term landscape still seems to play an important role, so that it is not exaggerated to talk about a new landscape-functionalism. The social background for this renaissance of infrastructural approaches to green planning is obvious. Overall it is the perception of a so-called ecological crisis (Latour 2009), related and cumulated to the detection of climate change and as a consequence of an emerging culture of sustainability (Eisel, Körner 2006).
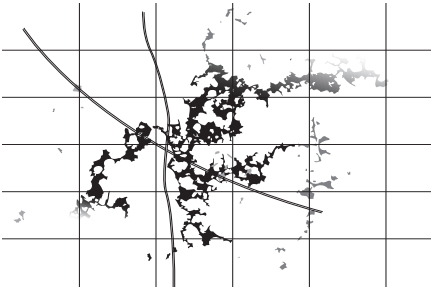
FIGURE 1 Spatial pattern of green infrastructures
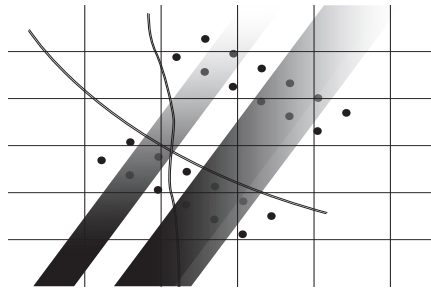
FIGURE 2 Spatial pattern of landscape infrastructures
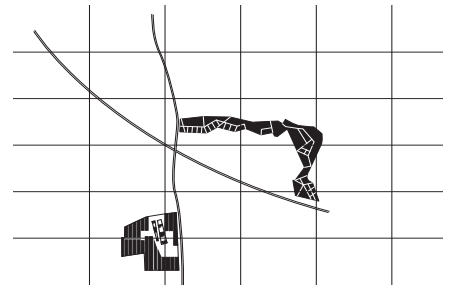
FIGURE 3 Spatial pattern of landscape machines

On an expert and planning level there are three reasons:
1. The return of the "big plan" in urban planning in the form of strategic development plans after the planning crises (Polinna 2010). This demands green planning on a metropolitan or regional scale, that is: the All London Green Grid (Greater London Authority 2012), PlaNYC (The City of New York 2011).
2. A more pragmatic approach in nature preservation. The preservation of nature on a landscape level was not especially successful. The special formation as ecological networks or habitat networks is more obvious, especially to persuade the opponents of "preservationism"—civil engineers. They are building so-called gray infrastructures. To complement this with green and blue infrastructure is a win-win situation for planners and politicians.
3. The concept of ecosystem services. In the past this green infrastructure was justified by miasma theory, and the support for physical and mental health by green spaces. With ecosystem services this "soft," or even wrong, justification was replaced by hard facts like carbon sequestration or water purification (MEA 2005).

INNOVATIONS OF THE NEW LANDSCAPE-FUNCTIONALISM
What are the innovations that the new landscape-functionalism has to offer compared to green infrastructure?

1. In both concepts, the authors dissociate themselves from the romantic, bucolic, and picturesque pattern of landscape, and deliver manifestos for a new landscape aesthetic based upon efficiency. That's an important difference from the concept of green infrastructure, where beauty is only one of the many features that "green" has to offer anyway. That's why more square meters of green means more beauty. The new functionalists are following a different aesthetic concept. A landscape is beautiful (or even sublime) when it expresses its utility in an optimal way: that means without frills and ornaments and redundant formality.
2. The authors understand their concepts as working methods to establish a new kind of infrastructure. They state that there is a modernist kind of infrastructure that is centralized, mono functional, separated from context, and mainly based on non-renewable energy sources. This old infrastructure has to get substituted by infrastructure that is decentralized, multilayered, site specific (interlinked with local ecosystems), and regionally renewable.
3. Based on these functionalist aesthetic principles and this new infrastructural approach, the authors can combine landscape and infrastructure into a new spatial entity, they call landscape machines or landscape infrastructure. But would these concepts be adequate as planning principles

if considered on a more general level? To identify some characteristics and differences as general principles for planning, we will compare the three concepts and how they are related to three very general planning goals: participation, practicability, and aesthetics.

a. Is the concept applicable in participative or argumentative planning processes? Or, in other words is it, or can it, be a democratic planning instrument?

b. Is the concept implementable, and for what? Is it an efficient planning instrument to achieve specific planning goals?

c. Is the concept enabling and stimulating new aesthetic ideas? Is it a creative and aesthetically innovative planning instrument?

PARTICIPATION, PRACTICABILITY, AND AESTHETICS OF GREEN INFRASTRUCTURE

We include in our consideration urban green systems (like green grids) and ecological networks [**FIGURE 1**].

a. Green infrastructure planning is based on the identification of areas that supply some relevant ecosystem services. The planning goal is to tie these valuable areas into a network to accumulate these services. This spatial organization makes it possible to spread these services over a maximum domain and provide them to maximum users. Areas are selected because of their utility and their position related to other areas. But in the case that some stakeholders disagree with that selection, the planner can propose some alternative areas with possibly the same value, or an alternative area can be prepared to be as useful as the other one. So areas and their spatial formation are exchangeable and flexible because their value is abstract and not site-specific. These are excellent requirements to implement green infrastructure in argumentative planning processes.

b. The planning goals are the preservation, construction, and connection of habitats and/or urban green spaces. Because a network is a flexible form and the knots of a net don't have to be on specific places (but in specific relations), it's possible to find alternative spatial compositions if, that is, some selected areas are not available. So the network is a practical geometric model to create a spatial correlation. Before this background, the concept of green infrastructure and green infrastructure planning provides a pragmatic working method to preserve and

develop green spaces well grounded on their functions for human well-being.

c. Aesthetics is the weak point of the method. Having a long tradition in nineteenth century urban park planning and nature preservation, the concept has incorporated the traditional pattern of landscape aesthetics in their performance. As this aesthetic pattern is functionalized and naturalized in the method of green infrastructure planning, new aesthetic patterns can hardly emerge. Aesthetic value is not necessary to give reason to establish green infrastructure; what counts are the ecosystem services they can provide.

PARTICIPATION, PRACTICABILITY, AND AESTHETICS OF LANDSCAPE INFRASTRUCTURES [FIGURE 2]

a. The idea of decentralization and site specificity of infrastructure raises the hope of the author that this makes it possible to establish a regime of technology that can be reconnected to the order of landscape and/or create a new spatial pattern that will be received as landscape. The crucial question is if this new universal landscape pattern is flexible and open enough to incorporate results of democratic decisions that contradict this new order, for example, decisions for mono functional and centralized infrastructures like a pump storage power plant, or decisions to keep old bucolic landscape patterns. One of the problems of the concept is that the ability to incorporate infrastructures into a landscape pattern has nothing to do with the question of whether they are the most efficient technical and sustainable solution. So, it will still be necessary for a society to decide between practical/economic and aesthetic values, as we do now in all landscape versus infrastructure discussions.

b. The planning goal is to create landscapes based on spatial patterns that are caused by infrastructures based on the site-specifity of natural resources like hydrological systems, wind conditions, etc. If following the site-specifity of resources is necessary for technical reasons (such as positioning of wind turbines), landscape infrastructures could be a practical and socially relevant planning concept to design the transformation of landscapes.

c. The aesthetic value of landscape infrastructure is grounded in the efficiency of its alternative infrastructure. This might prove problematic if this kind of infrastructure is not a socially preferred option, but if it is perceived as a destruction of the traditional pattern of landscape. To tackle

this problem it would be helpful to integrate an idea like André Corboz's "land as palimpsest" (Corboz 1983) into the concept of infrastructural landscapes. Then the outcome of landscape transformation would not be a new totality based on a new infrastructural regime, but could be a process where the layers and patterns of the existing landscape are respected, and the change is perceived as enrichment and not destruction.

PARTICIPATION, PRACTICABILITY, AND AESTHETICS OF LANDSCAPE MACHINES [FIGURE 3]

a. Landscape machines are well-designed biotechnology facilities, such as water purification, fish, or energy production. On a spatial level, there is not a big difference to classical technical facilities like factories or power plants. Both claim a defined territory more or less separated from other uses such as housing. The difference is the technology used. The authors would claim that landscape machines are site-specific because they are bound to use the natural resources and ecosystems of the site. But from that perspective, every atomic power station is site-specific. Its location was chosen because of the amount of water that is available there that is needed for cooling the reactor. Because landscape machines are not site-specific on a technical level, it's always possible to discuss alternative locations in argumentative planning processes.

b. Biotechnical facilities are getting constructed en masse and they are often perceived as alien elements in the landscape. So, if the public awareness of this problem rises, there will be a need for well-designed biotechnical facilities; even better if they will be perceived as part of the landscape or maybe even as landscapes on their own. But to achieve this goal it is very important to provide public access to those facilities.

c. The planning goal is to create productive biotechnical facilities that also have value as landscapes. The authors state that the beauty of this landscape will arise from the productivity and efficiency of the production process. This could be true if the facility could be used by the public for landscape activities like walking, biking, and social activities, and at the same time, makes it possible to experience the production process that happens on the site. That land could be useful and beautiful at the same time is an appealing but not new idea—we call it (after Virgil's didactic poem) georgic landscape.

CONCLUSION

This comparison shows that the new concepts are not alternatives that can substitute green infrastructures, but they are possible planning concepts that can deal with problems which cannot be solved by the traditional functionalistic approach. The task of landscape infrastructures as a planning concept could be to design the transformation of landscapes caused by new decentralized infrastructures like wind turbines or biomass plants. The task of landscape machines as a planning approach could be the design of biotechnology plants that are "walkable" and can so be experienced as landscapes. Both concepts are following strong aesthetic approaches, even tough they are disguised as functional—but that's how functionalists have always thought about their designs.

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WALKING NARRATIVES: INTERACTING BETWEEN URBAN NATURE AND SELF

SANDRA COSTA
Birmingham City University, Birmingham Institute of Art and Design, School of Architecture, United Kingdom
sandracostabaptista@gmail.com

Sandra Costa is a landscape architect and urban planner with diversified experience encompassing teaching, research, and professional practice. Since 2003 she has been teaching landscape architecture at the University of Trás-os-Montes and Alto Douro (UTAD, Portugal) and recently began teaching at Birmingham City University (UK). She is currently conducting research for a PhD in the UK in the field of landscape perception and sense of well-being, after being awarded with a doctoral fellowship. In addition, Sandra is a research collaborator at the Centre for the Research and Technology of Agro-Environmental and Biological Sciences (UTAD), where she is presently investigating urban allotment gardens in Portugal.

RICHARD COLES
Birmingham City University, Birmingham Institute of Art and Design, School of Architecture, United Kingdom
richard.coles@bcu.ac.uk

ANNE BOULTWOOD
Birmingham City University, Birmingham Institute of Art and Design, School of Architecture, United Kingdom
anne.boultwood@bcu.ac.uk

narrated walks / slow down / silence / memory / perception

INTRODUCTION

In this paper we explore what in situ, immediate and immersive experience can reveal for landscape research and emphasize the importance of slowing down, silences, and memories to reduce the distance between self and nature. We acknowledge that the interaction between places and self-prompted by the immediacy of the moment in which they occur is important to construct, reconstruct, and renew meanings and attitudes towards nature.

Berleant (2004) points out that "Perceiving environment from within, as it were, looking not *at* it but being *in* it, nature becomes something quite different. It is transformed into a realm in which we live as participants, not observers" (Berleant 2004, 83). On the premise that being in nature is quite different than looking at it, we are developing research which furthers our understanding on landscape perception from the unique point of view of the user during active in-transition engagement, which we argue reveals the ways individuals access, connect, and interact with places, moving away from methods highly dependent of static views and image-based representations (Kaplan and Kaplan 1989; Hartig and Staats 2004). This is research relevant for
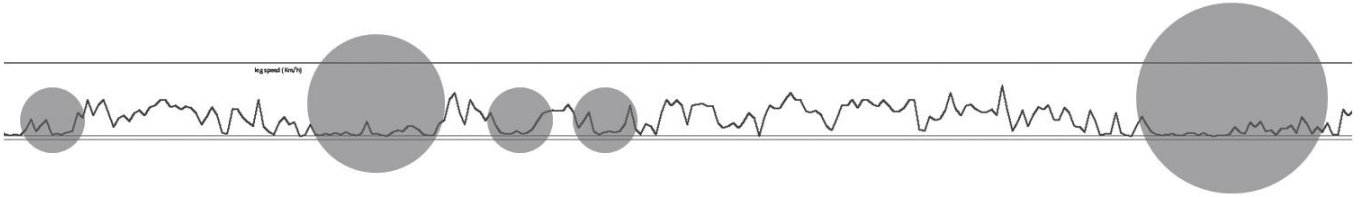
FIGURE 1 Section from a speed graph showing the rhythm of walking and indicating pauses. (Credit: Sandra Costa)

landscape architecture professionals, for whom uncovering the unknown requires also proximity and engagement to the landscape and different perspectives of seeing and feeling in order to increase sensitivity to processes, structures, scenarios, and narratives (Foxley 2010). Through walking in the landscape, we emphasize the idea that embodied participation generates more rhythmic, dynamic ways of knowing and feeling spaces and places (Edensor 2009).

METHODOLOGY

For research purposes, two case study areas have been established one in Portugal (Parque de Serralves), and another in the United Kingdom (Birmingham Botanical Gardens), on the basis that they are both green designed landscapes with a range of different environments and well established user/visitor groups. Two groups of adult participants were established, everyday users and landscape architects. Everyday users were selected through a questionnaire and landscape architects were directly chosen from practitioners. Both groups were invited to engage in the same set of environmental encounters and activities that were based on self-narrated walks and reflective diaries, during a period of six to nine months in at least two contrasting seasons. The self-narrated walks provided immediate accounts of the experience. This method is described as a participant lone walk, following a prescribed route during which the experience is GPS tracked, narrated, and voice recorded. Through this approach we obtained complex personal user descriptions, meanings, and understandings into how the places were experienced.

FINDINGS AND DISCUSSION

Encounters with the Parque de Serralves and the Birmingham Botanical Gardens generated a kind of rhythm of perceiving and connecting with those places revealed by participants's own narratives. Participants' narratives were profound and full of meanings, and revealed the physical and social characteristics of the place and its changes, their preferences, and favorite places. It also revealed the intangible or the immaterial, through the recalling of past experiences, yearnings, and wishfulness in relation to the place. [FIGURE 2] Furthermore, voice recording the self-narrated walk captured the silent moments and the meaning participants directly attached to them. Finally, it uncovered the interaction or, as Cresswell (2004) puts it, the "interplay" between nature and the self, which prompted unique feelings and emotions, and demonstrated their attachment to this form of nature. Here, we discuss three topics we consider to give insight to the understanding of nature and self-interactions.

THE RHYTHM OF WALKING — SLOWING DOWN

Results suggest participants slowed down significantly during the self-narrated walk. Speed average while moving was measured for the majority of walks below 3.0 km/h, and below 2.0 km/h when combining moving and pauses/stops. This is considerably slower than the average of a normal walk which is about 5.0 km/h (Knoblauch et al. 1996). [FIGURE 1] These measurements are in line with participants' perceptions and self-accounts of their own rhythm. For example, two participants reported:

"my walking really slows down here at the gardens. I usually walk at a very fast pace as there is always lots to do, but there's no need to walk fast here."

"... it's very nice area to sit down and just enjoy the colors. ... lovely feeling this does, this lovely gentle blue flower small flower, which creates a lovely kind of texture ... humm ... It's a very relaxing feeling."

FIGURE 2 Self and nature depicted by a participant during the self-narrated walk at Parque de Serralves, Portugal. (Credit: Research Participant)

FIGURE 3 Reconstruction and representation of a past experience. (Credit: Research Participant)

These quotes reveal participants's awareness of the importance of a much slower pace and pauses when walking through the gardens. Furthermore, a slow walk provides time to immerse in the details of the surroundings and allows greater interaction—with birds, people, plants, sounds—and full-body experiences (Merleau-Ponty 1995).

SILENT MOMENTS

We encountered a strategic use of silence (Le Roux 2005), whereby participants chose to add a "human silence" to listen more attentively to environment cues. We suggest these silent moments indicate meaningful and purposeful interaction, that is often not accommodated in landscape research (Watson et al. 2013).

Silence was added to create time and space to nature and self:
"this is so beautiful that I just want to turn inside and enjoy and be sitting on a bench and don't talk too much."
"it's pretty hard to speak because the birds are so great and I don't want to hear my voice."

The determination to replace voice with silence reveals how significant these moments are to generate links between nature and self. Turning inwards, listening in, and appreciating the beauty seem to be used to construct space for taking in the surroundings and for self introspection.

In other occasions silence happened as a way to trigger sensory experience, that is, as means to explore or to awake the senses as stated in the following participants quotes:

"I would stay here right now, closing my eyes and just let myself go."
"just stop and don't do nothing."

Silent moments can generate opportunities to open up space for "not thinking, just feel." Sensations other than sight are likely to be more awakened, less mediated by the eyes, and experienced more intensively. This generates a major motivation for turning inwards, and to be open to receive, major environmental stimuli, which are likely to enhance the meaning of hearing, smelling, and touching.

REMEMBERING PAST EXPERIENCES

Participants remembered and shared personal memories from these and other landscapes, as well as from past life events that included themselves and relatives or close friends. Narratives showed individual memories are important to the experience of a walk in urban nature and they facilitate the user's capacity to engage with those and other associated places. This echoes Bergson's claim that "there is no perception which is not full of memories. With the immediate and present data of our senses we mingle a thousand details out of our past experience" (Bergson quoted in Degen and Rose 2012, 3285). There were many ways in which participants recollected memories from past experiences of using green urban spaces. Here we discuss the constant pursuing for movements to other places and times, and the act of embodying memories.

From here and now to there and then. The places we select to undertake the research had the capacity to evoke memories and transport participants to elsewhere in a very strong manner. However, despite of the role the environmental sensory triggers in allowing this movement from "here and now" to "there and then," for some participants this seemed to be combined also with an active searching inside to locate those memories. For example, during the entire walk in the Botanical Gardens a female participant actively sought for, and showed, her powerful connection to Bangladesh where she lived for a couple of years in her childhood: "… this part reminds me Bangladesh, it smells like Bangladesh, it feels like Bangladesh... Every time I come here I feel as I'm in Bangladesh actually." This shows a constant searching inside and around for the memories (Hawksley 2009). **[FIGURE 3]** Embodying memories. In this context we understand embodying memories as self-conscious acts that create a whole new experience while remembering and revisiting past experiences. It expresses things that a person would have done in the past, and by remembering them it triggers small gestures such as "rubbing the leaves" or more active engagement with the landscape. For some participants remembering encouraged an activity which stimulated an interaction with the place. These embodying memories included the physical reconstruction and reinterpretation of past experiences such as "rubbing the leaves," "run small leaves down the water," "stepping stones," and "playing on the swing." That in-the-moment experience was magnified by making "here" like in "there" and senses of renewal and well-being were reported by participants.

CONCLUSIONS

Findings emphasized the importance of slowing down, silences and memories, prompted by the immediacy of the moment they occur, to reduce the distance between self and nature. Slowing down the rhythm of walking seemed to encourage stronger interaction with self and environment and to allow for appreciation of landscape details as sounds, textures, and colors. What also appeared to be essential to this interaction are the silences users strategically and consciously added, and the meanings they attached to them. Furthermore, we found memories crucial in constructing

the spatial and temporal narrative of the experiences and in making sense of them (Degen and Rose 2012). Within these movements in-between reality and immateriality, humans yearn for nature when they seek places endless times to revisit and renew feelings and memories from past experiences, recognizing they add an extra dimension to the experience. Reflecting on these three main topics invites a further examination of the role of designers in creating conditions that facilitate and accommodate such interactions. How the design of "nature" places can engage its users and how it generates multisensory and immaterial experiences created by immediate and in situ experience, in order to create proximities with users, need to be addressed in landscape architecture.

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NATURE OR CULTURE, THE WRONG QUESTION: FREEING LANDSCAPE FROM ITS SILOS

INGRID SARLÖV HERLIN
Swedish University of Agricultural Sciences, Landscape Planning at Department of Landscape Architecture, Sweden
ingrid.sarlov-herlin@slu.se

Her research focuses on planning and management of multifunctional and changing landscapes in urban, rural, and peri-urban areas, with multiple values and conflicting interests and stakeholders. She is interested in ecological, cultural, social,and experiential dimensions of landscape; the challenge of a holistic and interdisciplinary approach to planning; the underlying ideas behind landscape policy and planning tools, and how these are influencing the landscapes.

GRAHAM FAIRCLOUGH
Newcastle University, School of History, Classics and Archaeology, United Kingdom
graham.fairclough@ncl.ac.uk

An archaeologist by training, Graham worked for many years with English Heritage, one of the UK's national heritage agencies. He has written widely on both landscape and heritage, has worked alongside the Council of Europe on the European Landscape and Faro Conventions, and has participated in several European landscape networks. He is a visiting fellow and senior research adviser at Newcastle University (UK), joint-editor of the Maney journal *Landscapes*, an active member of COST IS1007 (Investigating Cultural Sustainability), and coordinator of the European network "CHeriScape" within the JPI Cultural Heritage program.

European Landscape Convention / landscape concept / landscape policies / national implementation / silo politics / cultural diversity

THE RISE OF "LANDSCAPE"

The European Landscape Convention promotes landscape as the frame of everyone's daily life, a tool for sustainability, a unifying concept merging nature and culture, and a cross-sectoral imperative that cannot be side-lined into a single policy area (CoE 2000/2006). It is in force in thirty-eight of the Council of Europe's forty-seven member states, and affects in theory over 80% of the EU's population. The ELC is, however, difficult to operationalize, and in most European countries the ELC's concept of landscape does not have a prominent role in legislation or policy.

The English word "landscape" in European usage evolved in meaning and breadth throughout the latter part of the twentieth century, and continues to do so in the twenty-first century. (For partial summaries see Wylie 2007; Bell et al 2011). Alongside its common meaning as scenery or a view, there now (for example) sit many more nuanced views of landscape as representation and symbol (Cosgrove and Daniels 1988), as polity and place (Olwig 2005), as politics (Bender 1993) and social construction (Luginbühl 2012), as a way of seeing and of being (Spirn 1998), as a matter of

human rights (Egoz et al. 2011), and as a tool for change as much as protection (Selman 2006, Fairclough 2007, Sarlöv Herlin 2004). This is a much more plural view of landscape, with a less excluding perspective and with an underlying sense that landscape is a common and universal good, and whose study must cross all disciplinary boundaries in order to have policy impact (see for instance ESF/COST 2010). Understanding or appreciation of landscape no longer depend mainly on the visual senses, but on other sensorial engagements, such as taste or sound, and with engagement through cognition, memory, association, action, and experiential participation, which helps to re align landscape both to its earlier dimension rooted in community belonging and action, and to the ELC vision of landscape as democratic participation.

THE "LANDSCAPE" CHALLENGE

The landscape concept is however problematic with regards to its national and linguistic differences. English "landscape" and French *"paysage,"* used in the two official versions of the ELC, are not (as many scholars have remarked) equivalent and neither is fully transferable into other languages. Landscape takes second or third place in public policy and interest behind less culturally sophisticated notions such as nature, ecosystem services, biodiversity, "countryside," or old-fashioned approaches to heritage. These appear less ambiguous but are also less unifying, more reductionist, less comprehensive, and ultimately less socially relevant and on their own of less value for future policy. The weakness of the landscape concept is also emphasized by contrasting meanings and interpretations of the word in humanities versus natural sciences, exacerbated by long-established habits of seeing landscape as a sectoral or single-disciplinary issue.

Finally, landscape is still often treated as a fragile inheritance requiring expert protection, rather than as a robust dynamic organism that is continually socially reconstructed as part of human culture.

In our current research, of which this paper is an initial notice, we are reflecting upon some of these problems through analyses of European and national progress reports of the implementation process of the ELC. Relevant are national differences arising from history, culture language, and planning traditions, including the varied background of the principal responsible ministry for the convention in different countries. Landscape is still frequently treated as the domain of a single discipline or sector. This dilutes the ELC's sophisticated treatment of the nature/culture relationship and its "offer" of a landscape-led project that can address sustainability challenges.

It is interesting to analyze first [**FIGURE 1**] where responsibility for landscape sits in each country. In a majority (about 67%) of states, the government departments chiefly responsible for landscape policy and the ELC are those dealing with environment or nature, in 17% it is a planning and development department, and in about 1%, it is a culture department. To exemplify this: in the Nordic countries, ELC implementation in Sweden is led by the cultural department, while environmental departments are taking the lead in Norway, Denmark, and Finland; in the many countries of the former so-called "Eastern Bloc," only in Albania does a cultural ministry lead the convention.

Landscape assessment is a key tool promoted by the ELC, and here too there is diversity across Europe (Fairclough and Sarlöv Herlin 2013). In many parts of Europe there is a tendency for practitioners to focus on character-based methods developed in the United Kingdom from the early

Main focus of government departments responsible for ELC implementation

Planning / Development
17%

Culture
16%

Nature / Environment
67%
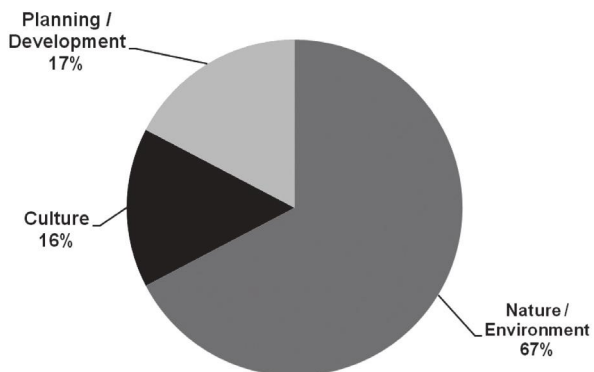
FIGURE 1 Analysis of main departmental responsibility for landscape at national level. Based on government reports (from 2002/2003, 2006/ 2007, and 2009) on the progress of implementation in countries that have signed the Convention (Council of Europe, 2013). (Source: http://www.coe.int/t/dg4/cultureheritage/ heritage/landscape/, visited December 1, 2013)

1990s, but many other approaches are in use across Europe. This is not only a matter of separate methods arising from different language (e.g. *paysage* as opposed to landscape), nor of methodological difference alone—similar methods (for instance, the British LCA method and the French Atlas approach) sometimes differ at the level of discourse and concept more than of technical method. Furthermore, even if one country's approach is adopted elsewhere, it normally requires adaptations to the different circumstances, types of landscape, policy needs, and culture-historical approaches to the idea of landscape. This methodological diversity is as important a part of European diversity as any other aspect, with benefits and values as well as disadvantages.

The Nordic countries share relatively common ideas regarding the historical development of the landscape concept, a well-developed democratic process, and a strong belief in the role of the state. The word *landskap/landskab* is shared between Sweden, Denmark, Norway, and the Swedish speaking population in Finland, while there is a distinctive Nordic concept of people's attitudes to landscape policy, not least the customary Right of Public Access. Since 2004, the Nordic countries have developed a joint initiative of cooperation, with regular meetings taking place in order to exchange experiences.

In the UK there is a long tradition of initiatives for integrated approaches, for example between natural and cultural interests, building upon an emphasis on social values, in landscape management. Many of the Convention's ideas were applied in England and other UK countries a long time before the UK ratified the ELC in 2007, and even before the Convention was published. This includes a history of collaboration in partnership and stakeholder involvement, although often firmly framed in governmental agendas. France, with Wallonia and, to some extent Spain and Italy, share an approach to landscape that is related to the UK approach but with significant differences. There is a strong conviction that people—citizens—stand at the center of landscape and that, because landscape is the concern of everyone, its assessment and characterization is a democratic task. In Central and Eastern European contexts, there is long and distinguished tradition of landscape thinking, with a strong focus on environment and natural diversity and protected areas, which appears to be quite distinct from those just mentioned.

CONCLUSION

It is clear that landscape is being seen as a potentially very powerful concept, but we are far from a situation where we share one understanding of it. The ELC clearly and

explicitly does not aim for a single Europe-wide approach. Instead, it accepts the need for difference and diversity as a healthy approach to something as pluralistic and subjective as landscape. This is one of the things that distinguish the ELC from EC environmental or habitat directives. Another is that the Convention does not dictate but persuade, and is rooted not in rigid policy or legal instruments but in ideas and fluid concepts, as well as a sense of democratic participation as something which must continually shift.

In some of the member states, the ELC landscape definition does not easily correspond with their own definitions and conceptual approaches. Landscape may be a unifying concept but on the European or international arena it does not have a single unified meaning. Would implementation of the ELC be most facilitated by gaining a more unified understanding of the landscape concept between European countries, or by a better understanding and valuing of the differences, deeply rooted as they are in landscape itself? How transferable is practice from one country to another? What does it really mean that we may be using different mind-sets when communicating about landscape in Europe? These questions (and others) form a significant research agenda for forthcoming research to give landscape research more influence in important areas of policy, action, and participation.

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TIMESCAPES.
NON-GEOGRAPHICAL APPROACHES TO LANDSCAPE

TIAGO TORRES-CAMPOS
University of Edinburgh; Edinburgh College of Art, School of Architecture & Landscape Architecture, Scotland
tiago.t.campos@ed.ac.uk

Tiago Torres-Campos is a Portuguese landscape architect. He lectures at the Edinburgh College of Art (University of Edinburgh) and also at the PhD program at the University of Lisbon (ISCTE-IUL). He is a member of the European Masters in Landscape Architecture (EMiLA). He researches contemporary perceptions and narratives of the landscape, focusing on time, speed, movement, and digital media. In 2007 he co-founded Terramorfose Landscape Architects, an award-winning small practice studio in Lisbon. He is a landscape consultant in strategic decisions in major urban planning projects in the Mediterranean, Angola, and Brazil. Between 2010 and 2012 he integrated PROAP Landscape Architecture's team. Being responsible for research and international communication, he edited and coordinated significant publications and design projects.

cognitive mapping / landscape / movement / non-geographical mapping / space / speed / time

TIME AND LANDSCAPE

Humans have a practical notion of time as the duration of things in life. Time connected to the idea of linking different events and of dividing life into parts: something that has happened before *(past)*, something that will happen after *(future)*, and, consequently, something that is happening now *(present)*.

Humans have has always found in time a useful tool to apply to their daily life: life/death, day/night, months, seasons, etc. Understanding time as the duration of events means to associate *time* with *change* (Nunes 2010; Pallasmaa 2009). Time was absolute for Aristotle as it was for Isaac Newton: a line connecting past, present, and future; a mathematical concept independent from the observer. This idea was connected to the concept of irreversibility. But in the twentieth century, the idea of time as *absolute* gave place to time as *relative*; time interdependent of space; time as a contamination of past and future into the present. Albert Einstein, after Agostinho, Martin Heidegger, or Jorge Luis Borges, also concluded that the notion of *present* only exists if there is an idea of *past* and an idea of *future* (Prigogine 1983).

Piacenza (antiga Placentia)

Distance between two towns
=
1 day travelling by horse

Fidenza

Parma

Reggio nell'Emilia

Modena

Castelfranco Emilia

Bologna

Imola

Faenza

Forlì

Cesena
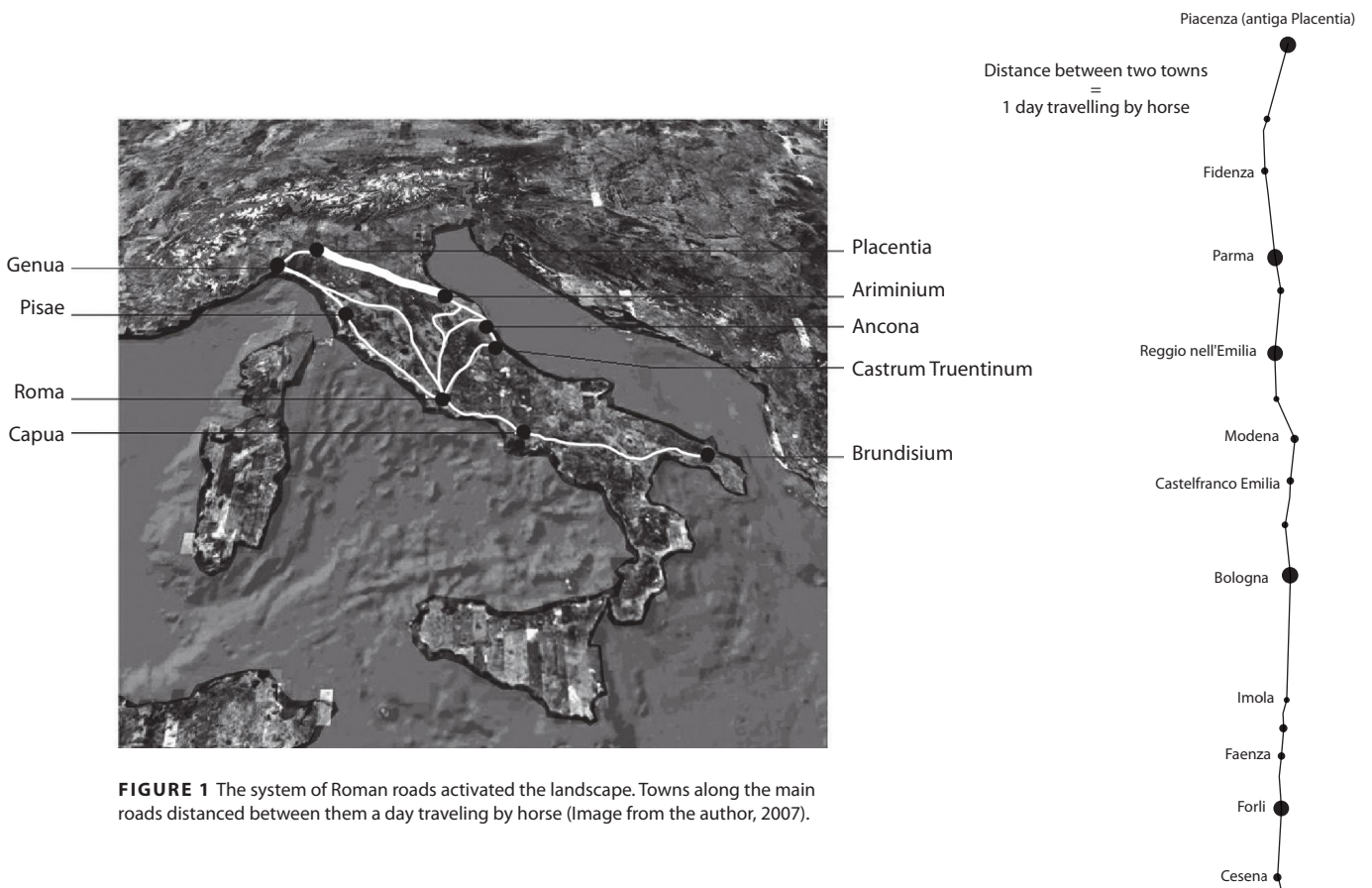
FIGURE 1 The system of Roman roads activated the landscape. Towns along the main roads distanced between them a day traveling by horse (Image from the author, 2007).

Time is a human construction that places Man in space. According to Bernard Tschumi, "*time* is what allows us to measure *space*," that is, "*time* is spatial because *space* is what we construct, and time is there to activate these spaces." And, since it is a human product, it can be manipulated —collapsed, accelerated, reversed, put into simultaneity (Tschumi in Virilio 2000). And when admitting a spatial quality in the notion of landscape, one can easily apply the same reasoning: time is what activates landscape [**FIGURE 1**].

TIMESCAPES: THE NON-GEOGRAPHICAL DISTORTION OF THE LANDSCAPE

"Time-space as commonly understood, in the sense of the distance measured between two time-points, is the result of time calculation." Martin Heidegger

Research dating from the decades of the nineteen-seventies and nineteen-eighties in the fields of cognitive science and environmental geography placed cognitive mapping as an integrated approach essential for the survival of all beings that move. The relation between space and time is what allows the generation of reasonable expectations, "so that we can make appropriate decision about spatial behavior" (Downs and Stea 1977).

The way one moves in the landscape is, somehow, how one engages with it. Tim Ingold talks about qualities of movement that are profoundly social, being "both perceptive of the world and generative and transformative of it." (Vannini 2012). When walking, one is allowed to see a small portion of the landscape but with great detail; when driving one sees larger portions of it but with less detail; and when flying one sees very large extents of it but with very small detail. That is, eventually, a possible interpretation of Ingold's concepts of *moving along* and *moving across* the landscape (Ingold and Vergunst 2008).

This relation between time and space, which can be called speed, has become an inevitable, and even essential, condition to address contemporary complex transitional territories. Speed is a precondition of today's way of living and a product of technology; "a virtue in many societies." And even if sometimes speed is relative, as it is mistaken with mobility, the fact is that Man moves faster and further than every other period in history. And progressively faster sorts of movement have brought inevitable consequences to the way one perceives the landscape (Hamilton and Hoyle 1999). Due to the existential need of inhabiting the physical world, Man has learned to perceive and control how time affects life (Nunes 2010). But the more power He gained over the manipulation of time, the less dependent He became on space, what originated severe distortions on landscape perception. Research
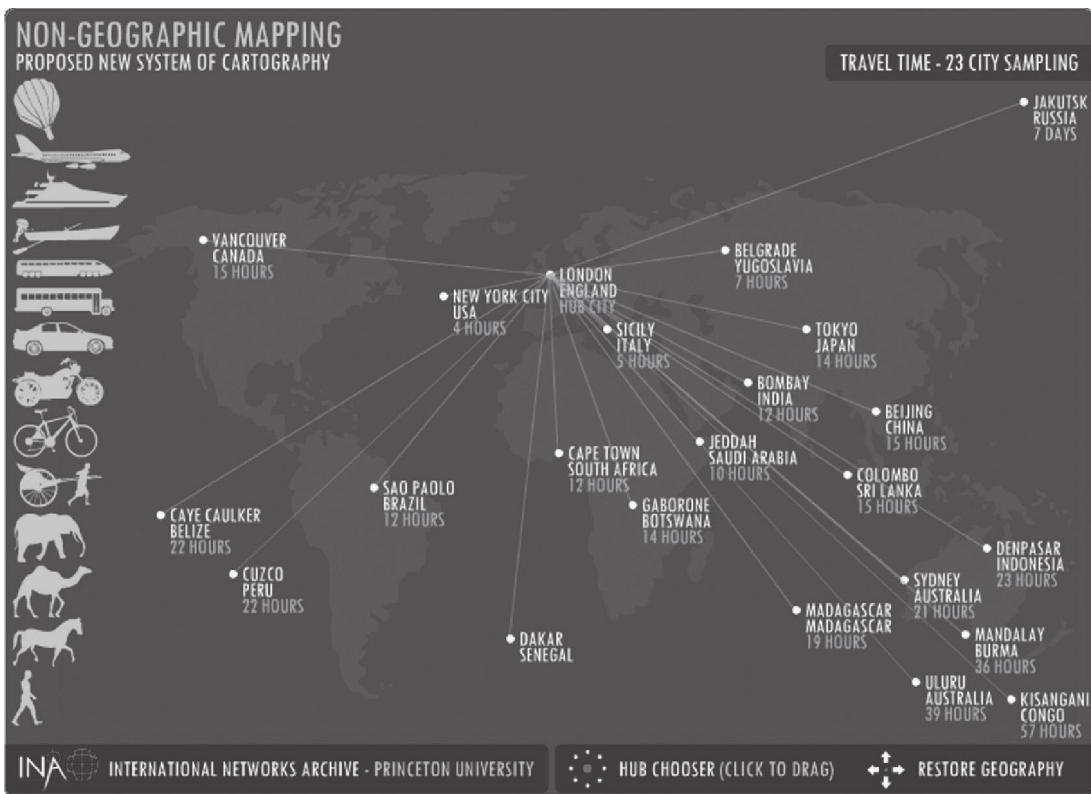
FIGURE2 Non-geographic mapping (Harris 2004). Image shows examples of the disconnection between time and space when traveling by plane.

on cognitive mapping was a wakeup call that human's perception of reality might be severely disconnected from the physical support that sustains it.

Technology has increased speed; speed has changed human patterns of movement; movement has allowed greater distances; and greater distances have changed the way we perceive the landscape. As in all other human constructions, time also has become affected by the advances in technology, to the point where "space becomes temporal" (Virilio 2000). When accepting Paul Virilio's idea, the relation between time and landscape acquires significant contemporary meaning: in its true dynamic nature, landscape is an ever-changing set of relations over a territory; therefore, spatial connectivity becomes as important as temporal connectivity. Landscape is a construction of not only a spatial network between all different contemporary territories, but also a temporal network that assures the relations between all different times that, in some way or another, have been responsible to forge the landscape itself. "Landscape is more a piece of time than a piece of space" (Nunes 2010). The role of communication networks, spreading across long-distance interdependent units and processes between urban systems, is minimizing the relevance of the territory itself (Castells 2000). Instead of setting the tone for human life, landscape has become "a random network of pure trajectories whose

occasional collisions suggest a possible topography" (Tschumi in Virilio 2000). The conceptual idea of disconnection between cognitive maps and physical reality is not new (Agostinho, Borges, Einstein), but the progressive human detachment from biorhythms is increasing it. On a landscape level, powerful infrastructures allow Man to move along and across the territory through abstract channels: highways, subway networks, flight connections, or GPS-based navigation systems. The more abstract the infrastructure, the bigger the manipulation of time.

METHODOLOGY

This paper is part of a wider research, which seeks to understand the relation between time and landscape, and the role of non-geographic approaches.

The methodology used here seeks to demonstrate some of the main conclusions coming from literature review: (a) that the disconnection between cognitive maps and physical reality increases with speed; (b) that people measure space by using time intuitively.

Three precedent studies are briefly presented, as examples of non-geographic approaches to reading the landscape, followed by two case studies focusing on two different hypotheses: (1) measuring space is more accurate with temporal distances than with spatial distances; (2) increasing speed applied
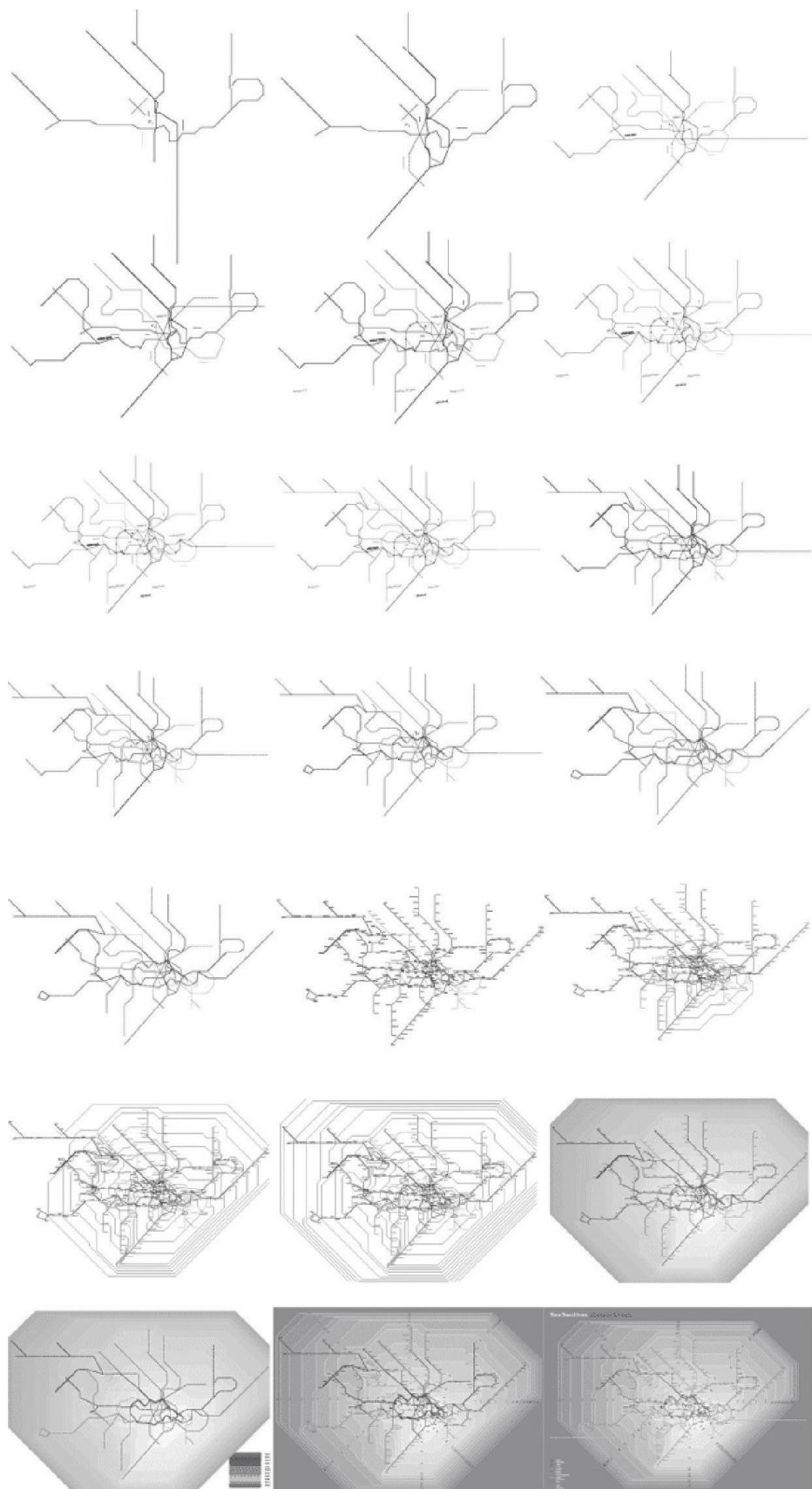
FIGURE 3 Time Travel (Karlin 2005). Image shows the evolution process recorded by the author.
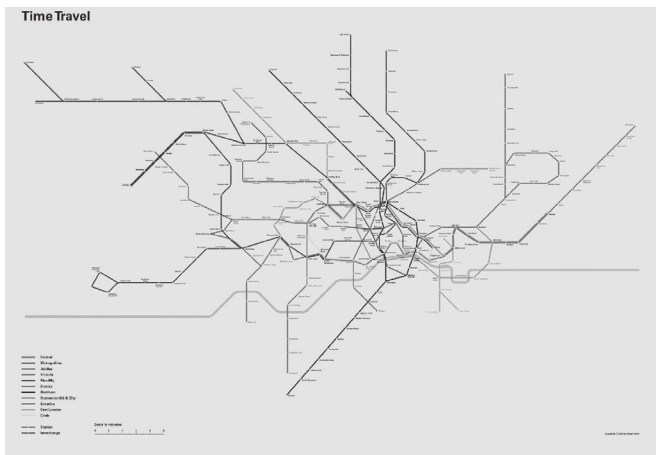
FIGURE 3 Time Travel (Karlin 2005). Image shows the evolution process recorded by the author.

THREE PRECEDENT STUDIES

Example A is called "Non-geographic mapping" (Harris 2004), which is a proposed new system of cartography that no longer refers to geographical distances but rather to time distances. The idea behind this example is that flight routes are so abstract that people lose the real territorial distances in favor of the time taken to go from point A to point B [**FIGURE 2**].

Example B is called "Time Travel" and uses London's subway network (Karlin 2005). Following the idea that all subway maps, as effective communication tools, are abstractions of cities' geographical conditions, Oskar Karlin explained how London's map would look if he replaced the conventional approach by another one that would consider the way people actually perceive time distances between stations [**FIGURE 3**]. Later, another student took one step further by creating software where people could interact with the map and acknowledge the level of distortion of the city (the further from the city center, the bigger the distortion) (Carden 2006). Example C is called "Geotaggers' World Atlas" (Fischer 2010).

Eric Fischer developed software able to register the time between all tags in pictures taken by users' cell phones or registered online (Flickr, Picasa, etc.), as they move through the city. The results were city maps tracing geo-tagged photos, therefore creating a new map layer upon the geographical ones showing how users perceive and move in the city [**FIGURE 4**].

CASE STUDIES

Journey From Home To School/Work In this case study two sets of questions were made, concerning the testing of the two above-mentioned hypotheses:

First set: (a) Time taken from home to workplace; (b) Distance between home and work place.

Second set: (a) Sketch the journey from home to workplace on a provided sheet, using any desired references points; (b) Repeat the task on a new provided sheet.

The first set intended to prove that each interviewee could provide more accurate time distances than space distances when referring to a daily journey highly controlled in terms of time and space. Results were analyzed with the use of statistics. Both perceived space and time distances were analyzed in relation to real distances [**FIGURE 5**].

The second set intended to demonstrate the level of disconnection between cognitive mapping and physical reality.

to movement promotes stronger distortion in landscape perception. These two hypotheses were tested by conducting two different questionnaires involving small focus groups. Results are discussed in the final chapter.

On question 2.a., a blank A4 sheet was provided; on question 2.b., an A4 sheet with a general map of Lisbon's area was provided. Results were analysed with the use of info graphics that relate the abstractions of the drawings provided on questions 2.a. and 2.b. with the real trajectory obtained from Google maps. Examples can be seen on [**FIGURE 6**]. Information about used reference points was also registered.

Trajectory Along Main Road In Small Town In this case study, two sets of questions were also made: First set: (a) Time taken from point A to point B; (b) Distance between point A and point B. Second set: (a) Sketch on the provided sheet the most important perceptions from the surroundings, using any desired reference points. These two set of questions were asked for two different types of movement: driving and walking. Interviewees were driven along the main road in the first case and were asked to walk as they would in normal circumstances in the second. Questionnaires were only answered after each of the processes was complete.

The first set intended to prove that each interviewee could provide more accurate time distances than space distances and that both distances would be more accurate when walking (slower movement) than when driving (faster). All interviewees were familiar with the road as a holiday destination. Both perceived space and time distances were analyzed in relation to real space and time. Results are presented in spider-web graphs relating perception and reality [**FIGURE 7**]. The second set was intended to demonstrate that disconnection between cognitive mapping and physical reality increased with speed. On question 4.a. blank A4 sheets were provided. Results were analyzed with the use of info graphics that relate the abstractions of the drawings provided on question 4.a. to both types of movement, with the real trajectory obtained from Google maps. Examples can be seen on **FIGURE 9**. Information about the awareness of existing buildings and secondary roads was registered and analyzed, both in diagrams and statistically [**FIGURE 8 + 9**].

DISCUSSION AND PARTIAL CONCLUSIONS

The pertinence of the theoretical part of this paper arises from the conscience that human capacity to move in space and time is limited; human power to abstract from and overcome the landscape's physical reality is limited. Recent research points out that even sophisticated patterns of movement need realistic relations to the physical reality (Cornelis, Cornelis, and Van Gool 2006).

Although recognizing that the small size of focus groups may partially undermine some of the results, the sole purpose of this paper is to demonstrate the two above-mentioned hypotheses, proposed following the presentation of the theoretical content, through the use of info graphics and statistical analysis.

In the first part of the first case study, it was not only proven that time distances were less distorted (only 11% of average distortion) than space distances (30% of average distortion), but also that more homogeneity is shown in results concerning time, indicating that time can eventually be a stronger intuitive tool for measuring space.

In the second part of it, three main conclusions were drawn: (a) more detail is given on the first drawing (on a blank sheet) than when provided a map; (b) the general notion of the trajectory is more accurate when provided the map; (c) the proportion of the trajectory increases significantly in parts where it becomes more complex (secondary or tertiary roads, when speed decreases). These conclusions may indicate that cognitive mapping shows more accuracy when the drawing has to be provided without any geographical hints. It also suggests that cognitive maps are based upon the geographic reality of the trajectories but are highly influenced by the type of movement and speed: increasing speed forces weaker perceptions of the trajectory itself and any reference points along it.

In the first part of the second case study, it was demonstrated that space distortion is bigger while driving (74%) than when walking (40%), while time distortion remained the same for both types of movement (69%), suggesting that control of time is not affected by speed. This appears to contradict, in part, the first hypothesis under test, but further research is required. The awareness of existing buildings and secondary roads was also weaker when driving (14% and 25%) than when walking (25% and 50% respectively).

In the second part of it, two main conclusions were drawn: (a) smaller levels of distortion in landscape perception are detected when walking than when driving (general layout of the road, identification of existing buildings and second-
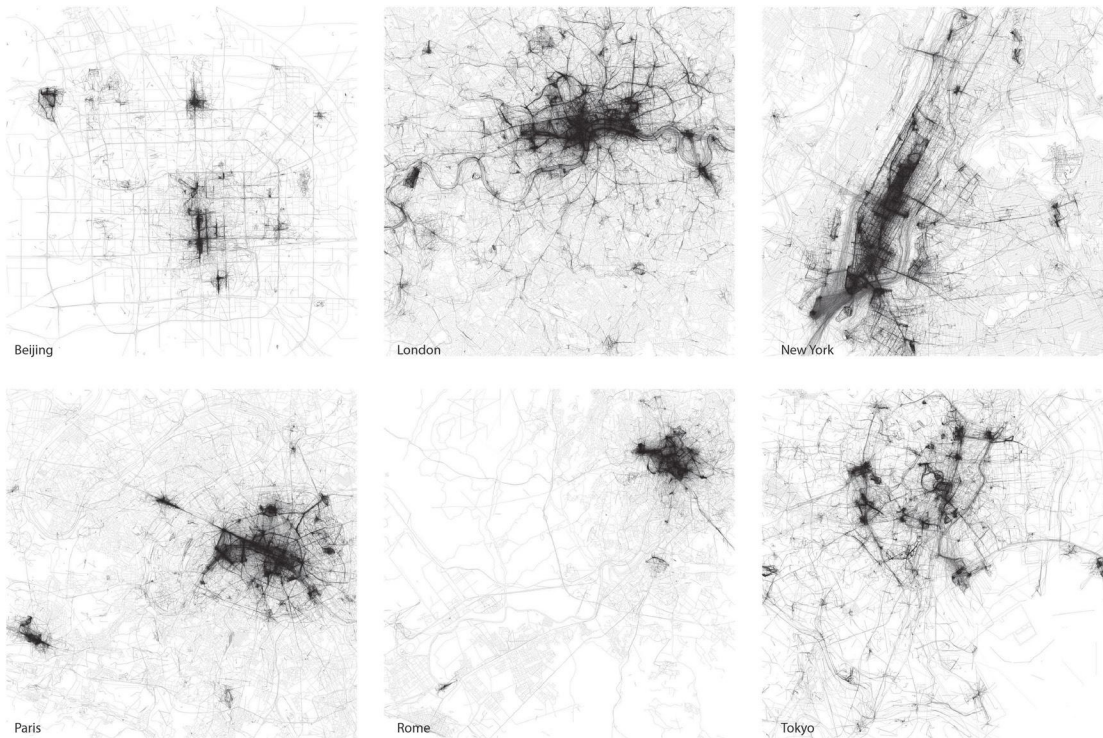
FIGURE 4 Geotaggers' World Atlas (Fischer 2010). Image shows different city maps tracing geo-tagged photos.

ary roads in the right place); (b) the bending angles of the road's general layout seem not to be affected by speed. This last conclusion suggests that some of the main features of the trajectory are equally perceived by the two sorts of movement, but further research is required.

The first hypothesis was demonstrated only to a certain extent: the disconnection between cognitive maps and physical reality may increase with speed but it was also suggested that, sometimes, time may not be affected by speed. The second hypothesis was demonstrated with a higher degree of certainty: time is a more intuitive tool to measure space than space itself, proving not only to be more accurate but also more homogenous and stable.

Conclusions in this paper also show the need to develop serious correlated research within the context of multi-task teams in the fields of cognitive sciences, environmental geography, architecture, and landscape architecture. This research should be oriented towards ways of using time to raise awareness for the discrepancy between physical and perceived geographical relations. It could also focus on landscape perception and how it is affected by movement and speed.

Expected outcomes arising from this suggested research should present possible tools (analytical, technical, design) to understand the contemporary complexity of the landscape by using non-geographical approaches.

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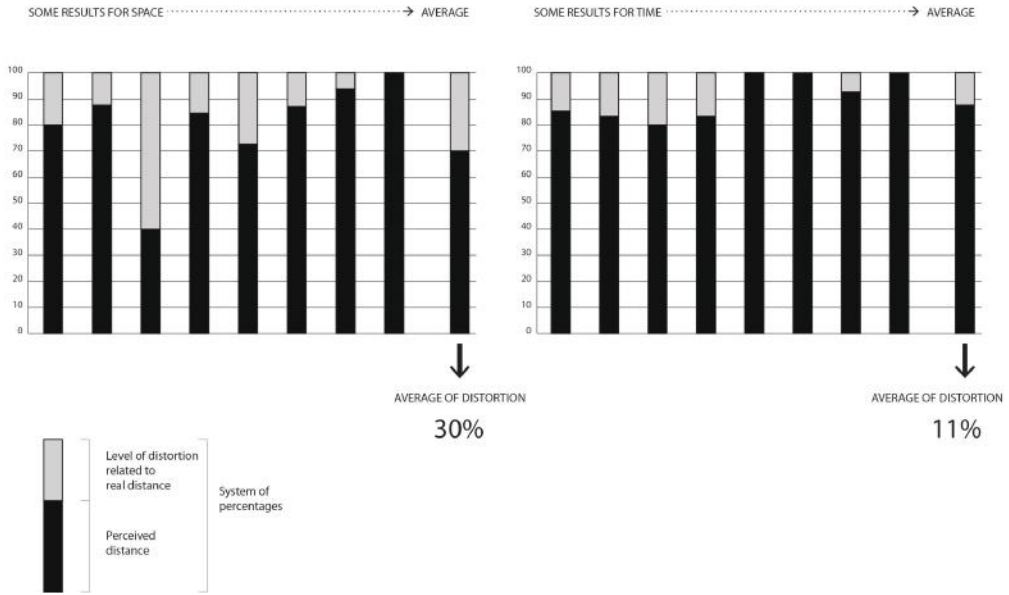
FIGURE 5 Disconnection between perceived and real space and time distances (questionnaire 1)
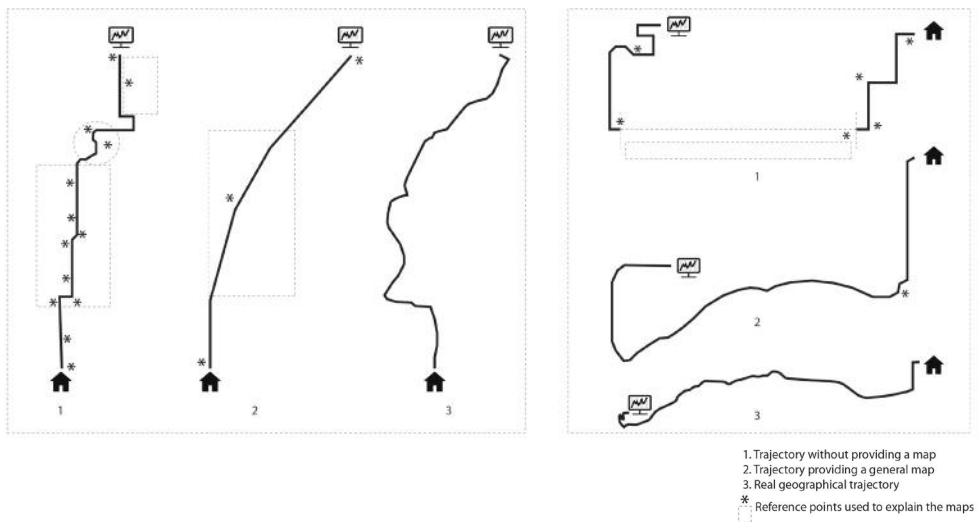
FIGURE 6 Disconnection between cognitive mapping and physical reality (questionnaire 1)
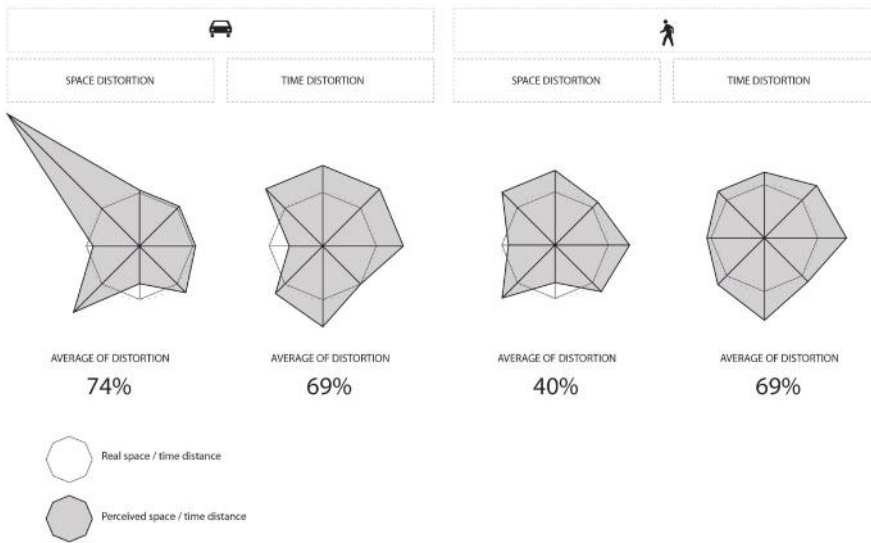
FIGURE 7 Perceived space and time distances in relation to reality (questionnaire 2)
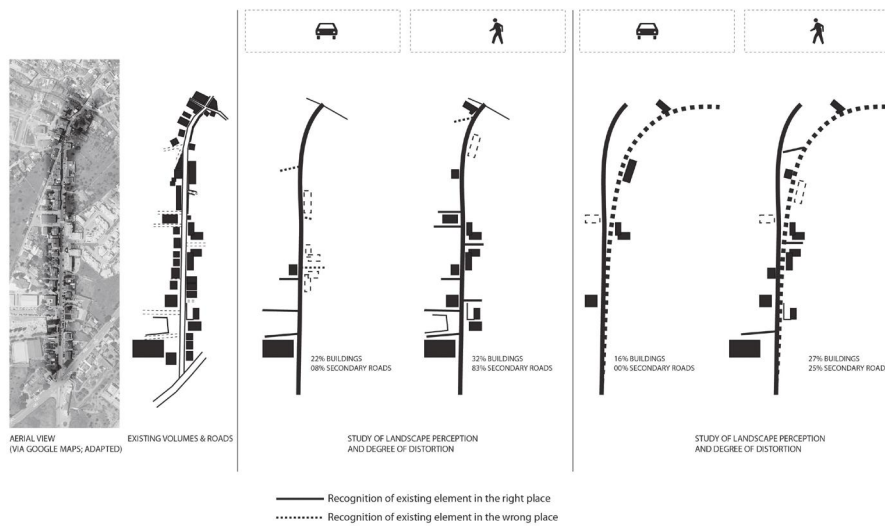
FIGURE 8 Landscape perception (questionnaire 2)
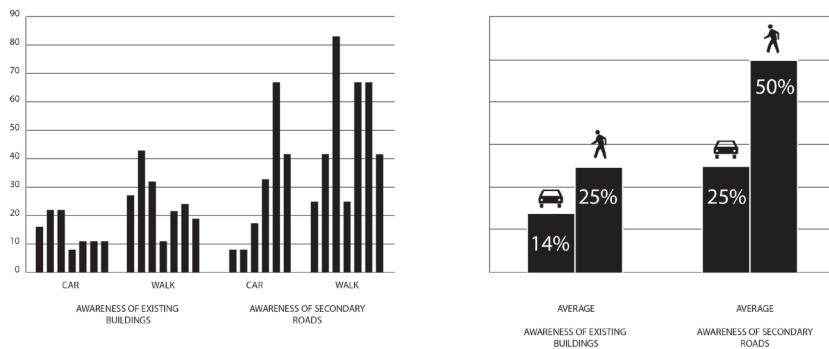
FIGURE 9 Awareness of existing elements in the trajectory (questionnaire 2)

THE HUMAN EXISTENCE BETWEEN NATURE AND ARTIFACT

ANDREA CEJKA
*University of Applied Sciences, Rapperswil,
Landscape Design, Hutterreimann +
Cejka landscape architects, Switzerland
andrea.cejka@hsr.ch*

Andrea Cejka, professor of landscape
architecture, Department of Design,
(HSR), a member of the University of
Applied Sciences of Eastern Switzer-
land, since 1993 office for landscape
architecture, since 2001 working part-
nership hutterreimann+cejka, www.
hr-c.net, jurywoman and counselor in
urban planning- and landscape archi-
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"Specific objects are simple in their shape and materiality and they can be inserted directly without mediation. Their simplicity and directness nourishes and challenges the perception of the observer. This encounter and insight makes the visitor part of the work of art." Donald Judd

PROJECTS

A place is a fixed point in a space. In a particular area, it has something that draws attention to it and is of an emblematic nature. Our aim is to create "specific places," places with special significance and of an outstanding character. We also give "non-places" a new, positive identity, thereby enabling them to become attractive landscapes. In this process we make use of identifiable artificiality such as the sugar cones in the play area at the Löbau State Garden Show, and non-identifiable artificiality such as the constructed eco-nomic axes as visual axes, and the old branches of the Danube in the alluvial forest area near Tulln. We dig, peel away the layers, and reveal specifics in the areas we discover abandoned, forgotten, or relegated. We search relentlessly for the special quality and high-light it, unexpected and attractive, like the sedimentation beds that become a water garden or the ancient forest that is quietly permeated and observed.

FIGURE 1 Built on sugar: sugar plateau and old storehouse

BUILT ON SUGAR [FIGURE 1]

The sugar factory towers of Löbau are located on a plateau near the old town, above the valley of the Löbauer River. The facilities, such as a beet-washing area with sprinkler system, gullies, lime kiln, and sedimentation basins for the water in which the beets were washed, dominate the plateau, the hillside, and the valley. The sugar storehouse and its impressive interior spaces, as well as various other definitive elements such as the sedimentation basins, have been retained as relics of the area's industrial history; they are incorporated into a new context. The aim is to connect the (ab)used landscape with the "sugar plateau" and the old town. The landscape is reshaped to create a leisure and relaxation area, without obscuring its history and the traces and scars of its former use.

A new connecting path—the mountain and valley promenade—makes this topographically challenging facility accessible. A cluster of sugar maples marks the beginning of the promenade towards the valley. The cluster frames the concrete pier of the former beet sorting plant, which has been reinterpreted to become a "beet tower." The beet was collected in a deep concrete channel and transported to the sorting station on conveyor belts. This secretive-seeming industrial relic—planted with king ferns—becomes a prehistoric sunken garden [FIGURE 2]. The former foundations

of the old factory halls with strange "elephant skin," which were discovered during deep rubble clearance, is presented as an artifact.

The promenade leads along the little sloping forest [FIGURE 3] —a large, well-structured beech copse spanning the incline down into the valley with rough sedimentation basins that used to hold the muddy sugar beet washing water. The basins with rough concrete walls, some of which had already dried out, have been sensitively transformed into water gardens [FIGURE 4] and play spaces. A small steel footbridge leads across the water. Here, sugar in its various aggregate states is the design-defining substance: there are "cubes of sugar" made of white concrete cubes in the dry playing gardens, and "sugar cones," [FIGURE 5] play hills made of white tartan, followed by water gardens with "icing sugar" made of white plastic balls, and then the "sugar water," enabling this sweet treat to finish up on a "sugar high."

These existing relics in Löbau have been placed into a new context—in a bricolage manner, a craftwork. This place has been reorganized, while keeping in mind its original use, which had already faded; it has been given new meaning through the addition of novel elements that search for a connection to the historical context. Fresh perspectives of the well-known thus arise, making visible the leap from industrial to leisure landscape.

FIGURE 2 Built on sugar: sunken garden in the former channel with the conveyer belts

FIGURE 3 Built on sugar: sloping forest leads down to the sunken gardens

FIGURE 4 Built on sugar: watergardens, former sedimentation basins for muddy sugar water

FIGURE 5 Built on sugar: sugar cones playground made of white tartan

FIGURE 6 Stories from the alluvial forest: dry branch

STORIES FROM THE ALLUVIAL FOREST [**FIGURE 6**]

The former alluvial forest area to the west of Tulln in a unique island location between the River Danube and old branches of the Danube is captivating; its valuable stock of trees provides true experiences of nature and has much recreational potential. The central and permanent garden show area is a former shooting range with a bullet trap, which has also been used as a riding arena in the past. However, in its former state, the dense, barely accessible forest area lacked clear orientation and visual axes to the town and to the water; the impressive Danube waterscape was hardly perceptible, leaving the potentials of this place untapped. Damming for flood protection had led several old branches of the Danube, the traces of which could still be seen, to dry up and become overgrown over the years. The plan was to revitalize them in order to ecologically upgrade the alluvial forest and to make them accessible to boat traffic. The whole alluvial forest area became a quiet, contemplative natural park. The old extinct branches have been cleared, flooded, and revitalized to become near-natural flowing waters [**FIGURE 7 + 7a**]. Canoes encourage visitors to enjoy wetland nature. Clearing axes form the structural framework of the alluvial forest and its newly added attraction —the garden show. They provide visual axes and create connections between the town, the exhibition grounds, and the surrounding Danube landscape. The sensitive existing clearings are transformed former service routes from the original alluvial forest [**FIGURE 8**]. Now converted into lawn areas, they provide views inwards and outwards as well as access between the garden show and the Danube alluvial forest. Bright garden splendor has been created in an existing clearing.

The former bullet trap at the end of the garden is displayed as a prominent original feature and modeled into a pyramidal sculpture [**FIGURE 9**], providing a view back over the garden show grounds.

TEACHING

The place is an overlay of natural and artificial traces; it is a point of departure and reference value in its full entirety. Aligned with the rich and poetic associations with the history of the profession, this is the basis for the specific nature of our landscapes as we design them and pass them on to students as a way of thinking.

In projects and educational work it is important to affirm the view of human existence between nature and artifact to embrace the history of the location as an opportunity to create a unique design [**FIGURE 10**].

"If you aim to appropriate a place you must first get to the bottom of it." The task is to move into sites with accurate
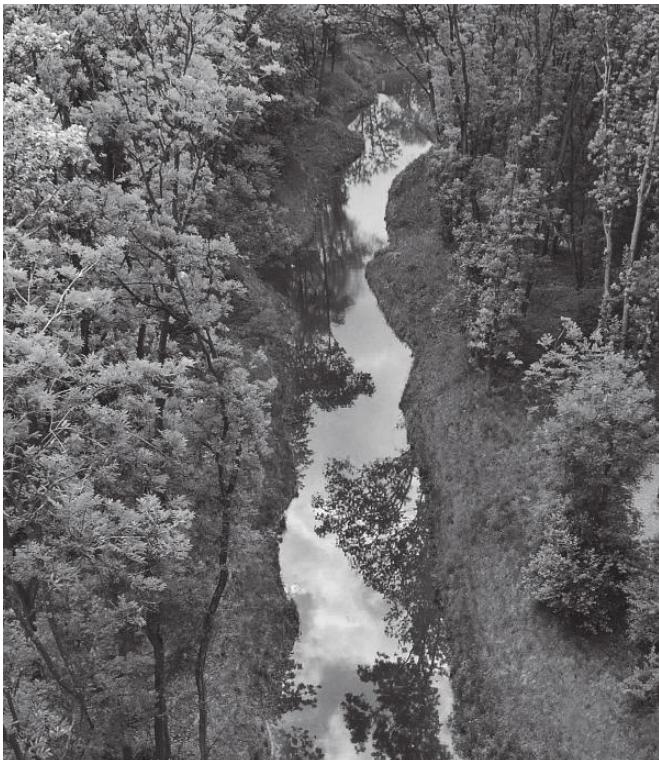
FIGURE 7 Stories from the alluvial forest: revitalized old branch of the Danube

FIGURE 7a Stories from the alluvial forest: canoe trip on revitalized branch

FIGURE 8 Stories from the alluvial forest: scout in one of the clearings

FIGURE 9 Stories from the alluvial forest: bullet trap as a pyramidal sculpture where visitors view back over the garden show grounds

FIGURE 10 Teaching: large format for printing, idealistic landscape, artifact, and nature landscape, student Stefanie Baumgartner

attention and utmost concentration and perceptivity to discover the details and specifics. We begin by exposing, layer by layer in the manner of an archaeologist. We carry out research in archives and make use of historical precedents. Then we investigate the place: how does the atmosphere of this place affect me? Where is the treasure buried? What finds can be transformed into the design theme and which ones will become artifacts? Students avail themselves of methods of differing speeds. Filming captures sequences, mood changes, and usability. The picturesque is recorded in the photographs. On the basis that by means of painstaking observation one can generate perception and imagination from what exists, sketches and drawings are produced repeatedly, from different perspectives and from the same as well as from altered locations. The act of observing and internalizing encourages creativity and abstraction, and leads to design. Drawing allows us to see and understand.

Whenever the site is understood, the factual drawings define its form: viewing and understanding a site in its multifaceted manifestation holds the valuable potential of generating specific identity. Ecological relationships can thus be recognized and understood, and transform into lasting design. This method of analysis, which combines different methods of visual perception and draws comparisons with historical research about the site, enables large, small, and complex landscapes to be re-discovered and designed. As a result, they remain distinct in their nature, reveal artifacts, and are specific.

NATURE HAPPENED YESTERDAY
DESIGN WITH NATURE

COMMENT BY ANGELUS EISINGER, ZURICH

Culture and nature come together in landscape architecture and landscape design, in that landscape design and its realization merge these two spheres to form a meaningful and functional, cogent relationship. Landscape has been transformed into an increasingly dense, nature-culture amalgam: it has created both new opportunities for nature to develop, and options for cultural enhancement. In view of today's urbanized landscapes, there is still much untapped potential for landscape architecture. "Design with Nature," the subject of this session, has a double meaning in this context. On one hand, it means "together with" the design and its own logics of nature, and on the other hand, that artifacts arise in the design from, and in consideration of, natural systems and their conditions.

ANGELUS EISINGER

is an urban historian and urbanist. His practice, Perimeter Stadt, focuses on consulting and conceptual work in urban planning competitions and studies. He is Director of Regional Planning Zurich and Environs (RZU).

The session addressed this recent hybrid moment of landscape design from multiple perspectives. Catherine Szanto's essay examines the importance of the history of a place and the role artifacts play as a condensation of history. Artifacts appear here as the bearers of a locally constituted spatial history that needs to be conceptually uncovered and updated. Joanne Phillips subsequently demonstrates, on the basis of her pedagogical model at the Manchester Metropolitan University, how new design logistics and priorities can be created using an approach to nature that is based on the peculiarities of plants and vegetation. This approach does not see plants as a mere expression of an alternative system of values, but rather as constitutively significant core elements of a design concept, which is not based on aesthetic concerns, but rather focuses on the benefits and function of plants and vegetation. This creates a sustainable, because it can be factually experienced, integration of an alternative system of values in our daily lives.

In contrast, Jürgen Weidlinger understands (inter)subjective experience as being the core aspect of a meaningful design process, because it creates an experience of nature and landscape. He focuses on the power of intuition and views design as an instrument of knowledge. His atmosphere concept, which is rooted in aesthetic theory, does not have a clearly defined conceptual nomenclature, but relies on the methodically and carefully constructed dense experience produced by the hand of the designer.

Hans Curtis Herrmann's presentation of a transformation project in Mississippi demonstrates the potentials of an integral design understanding, which creates experiences through the processes of the co-production of space and landscape. This results in new connecting factors for a particular site-specific and responsible approach to the landscape.

Soil is the most fundamental resource in landscape architecture. Martin van den Tooren's essay argues that the actual complexity of soil is the ultimate point of reference for conceptual landscape work. The various layers must inform the design process agenda. The design does not articulate, but rather facilitates the dimensions of the soil that are often the hidden from sight and direct experiences.

TEACHING INTERDISCIPLINARY SUSTAINABILITY: PROBING TRADITIONAL DESIGN/BUILD EDUCATION

HANS CURTIS HERRMANN
Mississippi State University, Architecture, USA
hherrmann@caad.msstate.edu

Hans Curtis Herrmann, AIA, LEED Green Associate is an assistant professor of architecture at Mississippi State University He holds both an M.Arch. and BS.Des. from Clemson University and is pursuing a MLA from Mississippi State University. He has practiced professionally throughout the Eastern US. His research interests are in design/build pedagogy, and the landscape/building interface.

WARREN CORY GALLO
Mississippi State University, Landscape Architecture, USA
cgallo@lalc.msstate.edu

Warren Cory Gallo, ASLA is an assistant professor of landscape architecture at Mississippi State University. He holds a BLA from Louisiana State University and a M.Urban Design from the University of Michigan. He has practiced in the Pacific Northwest, Midwest and South. His research interests are in sustainable stormwater design, policy, and pedagogy.

adaptive reuse / service learning / pedagogy / collaboration / community design

INTRODUCTION

The process for designing and constructing the Green Building Technology Demonstration Pavilion (GBTDP) offers many lessons. At the pedagogical level is the lesson regarding the scale at which design/build may be achieved within the academic framework. Hard learned lessons and firsthand observations regarding the development of an extremely complex project designed and built by students and instructors embody two of the major outcomes of this work. As a means of assessment, post-construction student surveys were given to probe the question of how the disciplines (architecture, landscape architecture, art, landscape contracting, and building construction science) perceived the process and what was learned by working collaboratively. The survey addressed five topic areas selected to provide a set of metrics by which to measure the education process. Attempting to address issues of sustainability, as a function of quality design, this work considered the proposed outcomes of Integrated Project Delivery (IPD) as outlined by the American Institute of Architects (2007). The report outlines the theory of improved efficiency as the catalyst

FIGURE 1 Museum complex including ground and pavilion structure (Credits: Hans Curtis Herrmann)

for improved sustainable practice (Bernstein 2010). It also suggests that collaborative design, through its increase knowledge sharing and stated goals and objectives, allows discipline-based practitioners to work toward a shared understanding of project expectation. The IPD method allows for critical cross-pollination of design concepts that work symbiotically to improve project performance as it relates to metrics of sustainability, cost, efficiency, client satisfaction, and project quality. From an educational point of view, the project was designed to explore the formation of knowledge via the pedagogical typology of learning by building. William J. Carpenter (1997) outlines a number of basic yet powerful insights on the subject of designers learning from the act of construction. He also outlines the growing necessity of designers to become more fluent in the means and methodsof construction as a way of becoming better aware of the ramifications of design.

Praxis has traditionally been a primary component of design education. Traditionally, designers learned by doing and seeing firsthand, with immediate *consequence* providing a powerful form of critical feedback. Furthermore, the notion of *reconciliation*, as an element of a successful design process is critical in forming a sustainably minded design professional. Reconciling theory with practice the design/build method of education, as suggested by Carpenter (1997), is

inherently self-critical and therefore consistently capable of including and drawing focus to some of the most pertinent issues of design. Alice Y. Kolb and David A. Kolb (2005) propose that, "…learning is a holistic process of adaptation to the world. Not just the result of cognition, learning involves the integrated functioning of the total person —thinking, feeling, perceiving and behaving." Demirbas and Demirkan (2003) found in their analysis of the design process that the learning cycle was a recursive one that uses experiencing, reflecting, thinking, and acting. The intent of this work was to build upon these findings by positioning students to be engaged in numerous activities in the design and construction process. Utilizing the extended duration of full-scale construction, the project inherently afforded moments of critical reflection that the authors hoped would inform future thinking and acting.

MATERIALS & METHODS

Project Roles The pavilion was the last of a five-phase improvement plan for the museum's grounds. The final phase called upon the joint expertise of the Department of Landscape Architecture and the School of Architecture. The pavilion, to be designed and built, was to incorporate green roof technology as a first priority. As the faculty, students, and clients collaborated on design concepts and issues of

FIGURE 2 The Oktibbeha County Heritage Museum Green Building Technology Demonstration Pavilion opening event (Credits: Megan Bean)

FIGURE 3 Pavilion earthwork and foundation installation by students and faculty (Credits: Hans Curtis Herrmann)

programming the scope grew to include the demonstration of adaptive reuse and material repurposing along with an urban-scale sustainable design demonstration component. Sharing the common interest of creating an environment that was both delightful to inhabit and didactic, with regard to stormwater management, the design team outlined issues of common substance through which to affect change. Conceptualizing the project as a living classroom, the design team chose to incorporate design responses that not only improved the immediate site but also the surrounding urban context.

Project Goals Goals of the project were established by the client and the faculty instructors, balancing the necessity to both project owner and students, the project was designed to unfold in a way that was (1) cost effective (2) time efficient, and (3) revealing of the values of allied design professionals. With regard to cost, the project was initially budgeted for a maximum of $10,000. As the project scope grew in response to the collaborative decisions made to increase overall square footage and pavilion material quality, durability, and performative capacity, the Museum Board chose to allocate more funds to the project. Students were consistently asked to consider their design proposals through the lens of cost and labor efficiency.

Scheduling of construction activities was viewed as a major design parameter. In addition, because the students were the labor force, they had firsthand appreciation of construction staging and material supply as well as countless other examples of construction logistics. Revealing the values held by allied designers was a priority in this work. By sharing the tasks and demonstrating, peer to peer, the issues and values of good design, students began to comprehend the potential for collaborative exchange. The project was intended to bring awareness to students while also building a sense of appreciation for one another's craft.

Course Description Two professors, along with the part-time assistance of two staff, formed the instructional core of the teaching team. The student body, a vertical assembly of undergraduate architecture and landscape architecture majors, was divided into teams of approximately twelve students each. The teams were assigned tasks that aligned most closely to their discipline knowledge domains. The integrated design approach undertaken by the faculty team leaders was communicated to the students as a component to the issuing of daily task instruction. Students were informed to the *why* of a task as it related to the predetermined design and construction staging plan.

FIGURE 4 Structural steel and pavilion fascia erection (Credits: Warren Cory Gallo)

Post Evaluation Survey In order to gather feedback from student participants, a survey was designed to be straightforward and impartial based on Dillman (1991). Qualtrics® (Provo, UT), a web based platform, was chosen to deliver the survey due to its low cost and accessibility to students. In order to simplify the survey, the majority of the questions employ a Likert-type scale with a few multiple choice questions to provide background information and one openended question for the students to provide additional comments. The survey had thirty-one questions broken into six sections: background, participation, knowledge, perspective, appreciation, and comments. Before the survey was distributed, it was submitted to and approved by Mississippi State University's Institutional Review Board. The survey was distributed to students via a series of three email correspondences, delivered one week apart. The survey was left open for one month. At the end of that period, of the twenty students in the class, fourteen responded. Raw data collected from the survey engine was sorted in Microsoft Excel. Descriptive statistics, including mean and standard deviation ($_{SD}$) are reported where appropriate. Questions requiring inferential analysis were analyzed in SPSS (version 20.0; IBM Corp., Armonk, NY). All results were found to be normal and therefore subjected to an Independent Samples T-tests with a confidence interval of 90%.

RESULTS & DISCUSSION

Description of Products and Activities The project was completed at an expense of $19,000 [**FIGURE 2**]. Accommodating the limited budget of the Museum required careful planning and the skillful reuse of materials. The super structure of the pavilion was formed by the former structure of a petro fueling station canopy. A structural engineer performed an analysis of the proposed new pavilion structure and provided fabrication details for strengthening the repurposed steel structure. Faculty and students completed the steel fabrication work along with a certified welder ensuring the steel frame conformed to required standards. The surrounding fascia and roof decking were prefabricated in sections and installed onsite.

The resulting products of this collaborative design/build effort include the Green Building Technology Demonstration Pavilion and the adjacent grounds [**FIGURE 1**]. The effort was achieved over the course of three academic terms. The first semester saw the design and installation of the primary site improvements and the superstructure of the pavilion including footings. The second academic term included the design and installation of a stair tower, façade, ceiling, and site furnishings. The third and final academic term included the design and installation of a finished ceiling and lighting system and fascia details.

Students were confronted time and again by unforeseen issues of construction logistics and material and methods feedback that provided a critique on acceptable construction methods and design aesthetics [**FIGURE 3 + 4**]. This form of design education formed learning outcome metrics that the instructors felt could not be revealed in typical design studio education. Facilitating reconciliation of construction-based feedback, the pedagogy relied on a degree of unchoreographed *discovery learning* (Bruner 1961). Succinctly stated by Jerome Bruner (1961, 26), "Practice in discovering for oneself teaches one to acquire information in a way that makes that information more readily viable in problem solving." The intent of the work presented here was to add to the existing knowledge of discovery learning methodologies as they relate to the education of sustainable design and collaborative practice.

Learning Outcomes from Survey Survey respondents included five architecture majors, one building construction science major, seven landscape architecture majors, and one landscape contracting major. The vast majority of the respondents were male (ten) and more than half (eight) participated in both the summer and fall work efforts at the museum. Lastly, on average students ranked their own construction experience between "little" and "some" (2.64 [$_{SD}$ 1.01]). Student felt they participated most on the construction of the pavilion and site elements (3.57 [$_{SD}$ 0.657] and 3.21 [$_{SD}$ 1.19]) and least on designing the pavilion site elements (2.29 [$_{SD}$ 0.91] and 2.36 [$_{SD}$ 1.01]). Students felt they learned the most about steel (3.50 [$_{SD}$ 0.65]), concrete (3.79 [$_{SD}$ 0.58]) and green roofs (3.50 [$_{SD}$ 0.76]). They also felt they learned between a "little" and "some" about wood (3.00 [$_{SD}$ 0.88]), pervious concrete (2.79 [$_{SD}$ 1.12]), plants (2.43 [$_{SD}$ 0.65]) and earthwork (2.86 [$_{SD}$ 0.86]). Students in landscape architecture related programs felt they learned more about earthwork and grading than those in architecture related programs (3.38 [$_{SD}$ 0.52] and 2.17 [$_{SD}$ 0.75] [t(12) = -3.57, p = 0.004]). Additionally, students who participated in the summer only, did not learn as much about green roofs as those who participated in the summer and fall (4.0 [$_{SD}$ 0.00] and 2.83 [$_{SD}$ 0.31] [t(5) = 3.80, p = 0.013]). Students' appreciation for green technologies (4.14 [$_{SD}$ 0.86]) and community service (4.00 [$_{SD}$ 0.68]) positively increased over the course of the project. Students' views of each discipline increased: architecture (3.36 [$_{SD}$ 1.01]), building construction science (3.86 [$_{SD}$ 0.86]), landscape architecture (3.93 [$_{SD}$ 0.73]) and landscape contracting (3.64 [$_{SD}$ 0.74]). Students in landscape architecture related programs remained neutral in their view of the architecture discipline when compared to students in architecture related programs (3.0 [$_{SD}$ 1.20] and 3.83 [$_{SD}$ 0.41] [t(9.041) = 1.83, p = 0.10]). Lastly, gender played a significant role in the respondent's perspectives. The females in the class gained a higher appreciation than the males of green building technologies (4.75 [$_{SD}$ 0.50] and 3.90 [$_{SD}$ 0.88] [t(12) = -1.799, p = 0.097]), community service (4.5 [$_{SD}$ 0.58] and 3.80 [$_{SD}$ 0.63] [t(12) = -1.911, p = 0.080]), architecture (4.25 [$_{SD}$ 0.50] and 3.00 [$_{SD}$ 0.95] [t(12) = -2.474, p = 0.029]), and landscape architecture (4.50 [$_{SD}$ 0.58] and 3.70 [$_{SD}$ 0.67] [t(12) = -2.074, p = 0.060]).

CONCLUSIONS

The survey suggests that students did not see the act of construction detailing as one of critical design. The rendered result illustrates that most students felt they had little input on the schematic design that was primarily completed prior to the start of the course. The intent of the faculty was to focus students on issues of detailing and material craft that was largely executed by the students. Educators seeking to instruct students in the art of construction detailing may want to incorporate student input in the schematic design phase of a project. Distressing was the conclusion that the construction process may not be perceived by students as a design activity, suggesting that design effectively ends, in the eyes of the student, at the drawing board. This potential student conception may hinder educators seeking to develop an appreciation and/or working capacity for integrated practice.

Learning from direct activities seemed the most powerful means of education. Challenging activities resonated while activities completed with machinery and/or by outside contractors were less deeply appreciated and, perhaps, incompletely synthesized as knowledge. This finding places an importance on the issues of project scope and duration in that it may be difficult to ensure that each student receive

an opportunity to contribute to every construction activity. The chain of events in the construction of the pavilion followed a typical path beginning with design, moving to earthwork, erection of a super structure, cladding, and finishing. This study suggests that in such a project schedule students involved in downstream construction activities, in this case architecture students responsible for the erection of the steel super structure, may be more likely to appreciate the tasks of those working to make preparations for the forthcoming construction activity. In order to avoid a loss of interest, or critical association, educators may want to plan for the shared responsibility of all construction activities across the entire construction schedule.

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PROCESS, UTILITY AND STRATEGY;
DESIGNING WITH PLANT MATERIALS IN AN UNCERTAIN WORLD

JOANNE PHILLIPS
Manchester Metropolitan University,
Landscape Architecture, United Kingdom
joanne.phillips@mmu.ac.uk

IAN FISHER
Manchester School of Architecture,
United Kingdom
i.fisher@mmu.ac.uk

Joanne Phillips and Ian Fisher are
horticulturalists, landscape architects
and lecturers in plant materials and
landscape architecture.

process / utility / pragmatism / chance / change

The potential of the environment to be framed as an ecological
staging for post-industrial urban reconditioning has found its
theoretical expression and critical dialogue in the writings as-
sociated with landscape urbanism. Initially the focus centered
on suburban sprawl, but gradually extended to infrastructure
as America started the long transition to post industrial ma-
turity. Examples, including Fresh Kills (Kimmelmann 2010)
and the Biotech Park in San Juan, Puerto Rico (Corner 2010)
illustrated the potential for a different approach, which prior-
itized process, scale, time, and transdisciplinary involvement
as key factors in an ecologically functional landscape.
In Europe "the landscape urbanism discourse that has devel-
oped (in Europe) has on the whole emerged less as a theory
than as a way to innovate at the level of design practice."
(Shannon 2006). Collaborative approaches to subregional
issues, which have strong operational credibility, for example
Emscher Park, have successfully been retrofitted in to the
concept of landscape urbanism and act as a model for future
practice.
The theoretical argument for advancing landscape urbanism
as a means of solving strategic issues that are cross-dis-
ciplinary and encompass everything from economics to

ecology may provide the framework for adaptive, resilient, and heterogeneous landscapes, but how does the framing of vegetation structures support this approach?

At Manchester Metropolitan University, the MA course in landscape architecture is testing the application of the theory of landscape urbanism to the unique British condition. Students also address the contradictions of rural/urban lifestyles in one of the most densely populated countries in Europe and are encouraged to challenge the collective aspiration that is firmly set in the nineteenth century, dreaming of a sub-pastoral idyll.

At the undergraduate level, it is recognized that there is a need to reposition the teaching of vegetation design and provide new measures for its place in future recomposed landscapes. Traditional approaches to learning about vegetation design have had an aesthetic focus rooted deep in the twin traditions of English ornamental landscapes and horticulture. This much-loved part of our culture has, since the eighteenth century, seen plants treasured as if they were an artist's box of paints, to be selected primarily for contrasting or complementing color. Other visual properties, such as foliage texture and flowering period, have also been carefully considered and celebrated. Non-visual aesthetic qualities such as scent and tactility are sometimes mentioned. Our national heroine of planting design, Gertrude Jekyll, typifies this painterly approach, here writing about color-themed gardens: "The business of the blue garden is to be beautiful as well as to be blue. My own idea is that it should be beautiful first, and then just as blue as may be consistent with its best possible beauty." (Jekyll 1914)

Our obsession with the appearance of individual plant species is an appealing and persuasive one because of its straightforward dependence on a comforting notion of ideal beauty. In student primers these ideas are evident in familiar section headings, for example, "Colour, Form, Texture, Accent, Scale, Sequence, Balance." (Austin 1982). This focus limits the students' conception of plants to a purely decorative role in which they become art objects, static in both time and space. At larger scales vegetation becomes a mass of undifferentiated "green balm for inept architectural planning" (Trieb 1999, 41).

On occasion, the primers refer to the idea that plants may also have uses. The definition of "use," however, can be a slippery one; "greatly reduced maintenance costs" (Austin 1982), is seen as the use of ground cover planting, whereas trees could be used for "structuring space" (Wohrle and Whorle 2008) or perhaps to "provide shade ... moderate temperatures and frame views" (Waterman 2009, 75) (in this last book, a 200-page volume, precisely two pages of text are devoted to "plants"). Such broad possibilities for what "useful" could really mean and at what scales we might aspire to achieve it further marginalizes utility in favor of appearance. Students who lack any kind of relationship with plants therefore find it difficult to conceive of employing plants to perform certain practical functions, and the information that does exist to help them is hard for them to find and interpret. We therefore decided to support their learning through three principles to be adhered to in our teaching about planting design.

STRATEGY

In our own course component at MMU, learning about plants has largely come under the heading of "Plant Materials," a course element paired with construction materials. This language embodies the problem of underestimating the *strategic* potential of vegetation. The risk is that the designer conceives of plants as decorative elements to be chosen in order to provide a particular visual "finish": a concept peculiarly misapplied to vegetation. Such an approach overlooks the possibility of considering them from the very start of a project, as a staging for the development of design thinking and with beneficial work to do. This entails an appreciation of landscape processes over time rather than focusing on the production of a static planting plan, which might give a snapshot of an ideal vegetation layout at the time of first planting, whereas a planting strategy could mean using vegetation as the principle means by which flooding from urban run-off is dealt with across a city.

This desire to see students reevaluating plants and allowing vegetation to inform their decision process from the beginning underpins the first of our three principles of planting design—that plants should be used strategically in the fullest sense of the word.

PROCESS

Our second principle is that of "Process," whereby we seek to develop students' awareness of the systems inherent in the performance of vegetation. This entails taking a scientific approach in order to attain a creative goal; that students may have an understanding of the processes of the soil, micro-climate, and physiology of the plants in order to be confident and capable in imagining potential roles for vegetation in their design.

New students on the whole lack confidence in plant knowledge as it is something that usually comes from age, experience, and cultural or family background. We wish to equip them with the necessary knowledge to make their own sound judgments about vegetation rather than relying on poorly chosen precedent or decontextualized third-party recommendations. This working understanding of the structures and processes of plants means that a student's strategy could include phytoremediation of ex-industrial sites, for example, perhaps for use as space-efficient urban food growing. Moreover, this scientific basis to learning should mean that students will be better equipped to design with inherent flexibility appropriate to uncertain conditions over time, because they understand some of the processes of vegetation systems and their relationships with the rest of the ecosystem.

Appreciation of plant processes also opens up the possibility of allowing a design to develop based around the presence and distribution of existing vegetation, using patterns of colonization and succession.

UTILITY

It is difficult for an inexperienced student to approach the task of creating a planting plan and specification that could result in what their tutor judges to be an aesthetically pleasing scheme. A great deal of knowledge is required to do this with any amount of success. A far more meaningful and accessible way in to planting design is to work with utility in mind. It is important that students understand that we are looking for useful planting in the sense of "of practical use, as for doing work; providing material results" (dictionary.com) rather than its looser definition of "serving some purpose …

of good effect." This pragmatic reason for including "Utility" as our third principle is of course borne of our desire to acknowledge the challenges which our environment has always presented to the people who live in it. The primacy of utility over aesthetic considerations is absolutely entailed in this responsiveness to site. In a world where chance and change in environmental conditions are more significant than ever, it is no longer an affordable luxury to base design decisions purely on aesthetic effect: we need to consider adaptability and investment in the functionality of our environment.

This is, of course, not to say that ornament and display are not possible. Rather, that the first step in vegetation design is asking what functions plants can perform in response to the particular conditions of the site and needs of its users.

METHODS

In order to begin testing our approach, we set up a small experimental design project in which students were to make design proposals for an urban site using only vegetation. The site was neglected grassland, which was undergoing a natural succession of vegetation, having been unmanaged for some years. Our aims in this project were as follows:

- For students to develop an understanding of key processes of soil, microclimate, and vegetation on the site and use this knowledge to underpin their design.
- For students to use vegetation to achieve strategic aims; in this case, we asked them to design an experimental teaching facility for landscape architecture students learning about plants.
- To allow students to experience designing for utility alone, freed from aesthetic considerations. They were to closely observe and record the site and then expand its range of functions.

Students then produced tree planting plans to include plots for five different key types of UK native woodland (Bishop 1973) and also visualizations of a strip of land scraped bare of growth and left to natural succession over a number of years. The aim of the latter was to increase their awareness of the possibility of using natural succession as a design strategy and to prompt them to develop initial skills of informed imaginative forecasting.

RESULTS

Students responded well to the idea of designing for utility and none of them used an approach based on aesthetics. Many of their designs were based on nascent understanding of plant processes such as growth rates of different species and likely patterns of reproduction through seed spread. The strategic aims of the project were also taken seriously, for example, individuals considered what might happen at the interfaces between each woodland type and made differing decisions about whether the types should be separated by breaks to keep the separate study areas distinct, or should be allowed to closely interact in order to provide opportunities for studying relationships between different species.

The least successful aspect of the project was the quality of response to their own recorded data about conditions and species on site. There was a missing link between recording of data and design development, which meant that students were unsure about how to apply what they had observed. In running the project again this year different teaching strategies will be developed and more time will be devoted to this analysis of data, which is quite different to the usual spatial analysis to which they are accustomed. The next stage for these students will be to decide their own strategic aims for vegetation, in response to their analysis of site conditions.

This paper may appear to reflect familiar territory for many academics who are involved in the teaching of planting design outside of the United Kingdom. However, for the authors it is somewhat of a revelatory experiment. Pragmatically, it engages students with the concept of vegetation as a dynamic and operational structural element, which both locates and creates identity. It therefore becomes an important teaching method to students who are increasingly disengaged from the slow speed of environmental processes. It also places the teaching of vegetation design in a theoretical framework appropriate to the twenty-first century, which looks to the future, unencumbered by historical baggage. Finally, through testing and application in complex site locations, it provides the potential to be adopted by practice as a more sustainable approach to vegetation design.

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GROUND AS A DESIGN MATERIAL IN LANDSCAPE ARCHITECTURE

LAURENCE VACHEROT
Latitude Nord, Montreal, France
info@latitudenord.com

Laurence Vacherot is a French land-scape architect and, together with Gilles Vexlard heads an office for landscape architecture and urban design called Latitude Nord.

GILLES VEXLARD
Latitude Nord, Paris & École Nationale Supérieure du Paysage de Versailles, France
info@latitudenord.com

MARTIN VAN DEN TOORN
TU Delft, Ecole Nationale Supérieure du Paysage de Versailles, Landscape Architecture, The Netherlands, France
m.w.m.vandenToorn@tudelft.nl

Martin van den Toorn is a landscape architect, teaching at TU Delft and at the Ecole Nationale Supérieure du Paysage de Versailles.

design practice / design materials / design methods / design research

INTRODUCTION

The term "ground" in landscape architecture is a large domain with different aspects and scope. Ground is first of all the result of geological processes where the upper layer of bedrock is transformed into soil.

Ground is also the surface on which all intervention takes place. The nature, form, and character of the ground surface is an elementary starting point for all landscape architectural projects. It is also the surface of the earth, think of the term "ground level" being the existing elevation as a starting point. Secondly, the sort of material that this surface is made of, is an important criterium; sand, peat, clay, and rock. For this aspect we mostly refer to the term "soil."

The disciplines of geology, hydrology, soil science, and climatology are closely related to the way ground is used in landscape architecture. Climate directly influences the geology of a site, plant growth, and vegetation indirectly influence the formation of soils.

Finally, ground is intricately related to culture at large; the relation between man and environment over time has created a history of the site that is part of the culture. Vitruvius (1999) was the first to draw attention in his writings to the

importance of ground, site, and soil for future use of the land. He deals extensively with the choice of site for construction and mentions the criteria that have to be taken into account. A special mention has to be made of projects in land art, in which artists and designers have developed a special approach to design with the land as such (Beardsley 2006). In the paper we distinguish between different aspects of ground as design material. First of all, the physical aspects that include also the technical; secondly, the user aspects and finally, the artistic dimension of the use of ground in projects like in land art. In most programs in landscape architecture, ground gets specific attention that is also reflected in textbooks like R. K. Untermann (1973) and more general ones like Kevin Lynch (1974) and J. L. Motloch (2001).

A BRIEF RETROSPECT. SOME HISTORICAL EXAMPLES AND PRECEDENTS—THE MONT SAINT-MICHEL VERSUS VERSAILLES

In both cases, the site has been enhanced by human intervention but in the case of Mont Saint-Michel [**FIGURE 1**], the site before intervention has not been changed whereas in Versailles [**FIGURE 2**] it has been largely modified by the plan of Le Nôtre. Both cases are examples of making use of the existing topography (Mont Saint-Michel) versus the changing of the ground surface in the case of Versailles. Both principles are still valid today.

MAKING USE OF GEOMORPHOLOGY

Le Nôtre made use of water, water systems, and valleys of different scale and size [**FIGURE 3**]. In Vaux, Chantilly, St. Cloud, he used an existing valley but the three valleys are very different in size and scale although the design principles were the same (Hazlehurst 1990; Rostaing 2001; Farhat 2006).

CONTEMPORARY PRACTICE; PROJECTS IN HOLLAND, FRANCE AND GERMANY

No project in landscape architecture can be realized without taking into account the soil, the ground level, the surface material. First of all because of the fundamental role of soil, ground, earth as part of the natural system. Secondly comes the site that has to be chosen or prepared for the program. Here the typical phenomena associated with ground and soil come into the picture; grading and leveling, cut and fill, terracing and retaining walls, exposition and microclimate (Marsh 1983; Kirkwood 2004). We have chosen three cases of projects from three countries: Holland, France, and Germany, that show a special attention for ground as a design material.

Holland; Enkhuizen, a naviduct as a new way of engineering the different flows The interaction between land, water, and flows, is brought to a new synthesis by redefining the problem of traffic over land, traffic over water, and the location of the dredge depot in a corner behind the dike.

France; Paris, Parc de la Villette, Jardin de la Treille
The creation of "a space in place"; by digging out the ground and thus creating a special atmosphere for park visitors but also for concerts and performances in the garden. At the same time, it also creates a special microclimate. Every year the grapes are harvested and used for the production of a special wine "Cuvée de la Treille" [**FIGURE 4**].

Germany; Munich, Riemerpark, the transformation of former airport into a new urban landscape. A playful composition of ground level by making use of small differences in elevation: view lines, green surfaces, different types of metalling and vegetation [**FIGURE 5**].
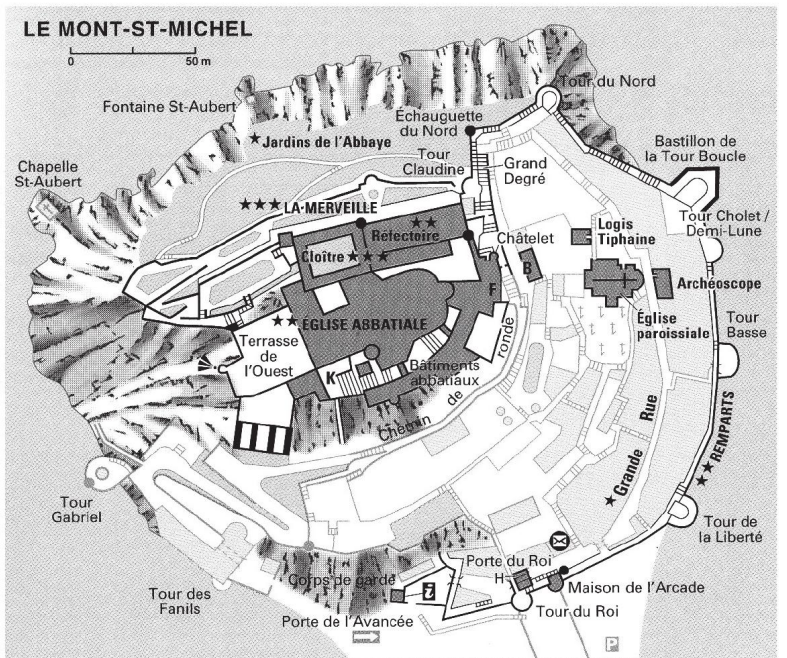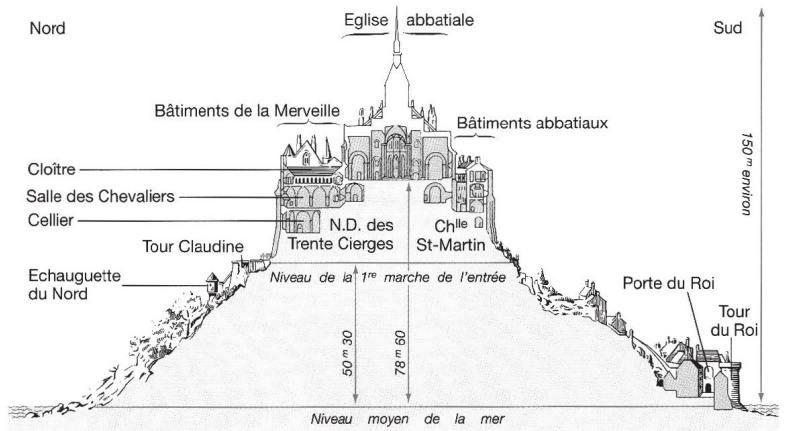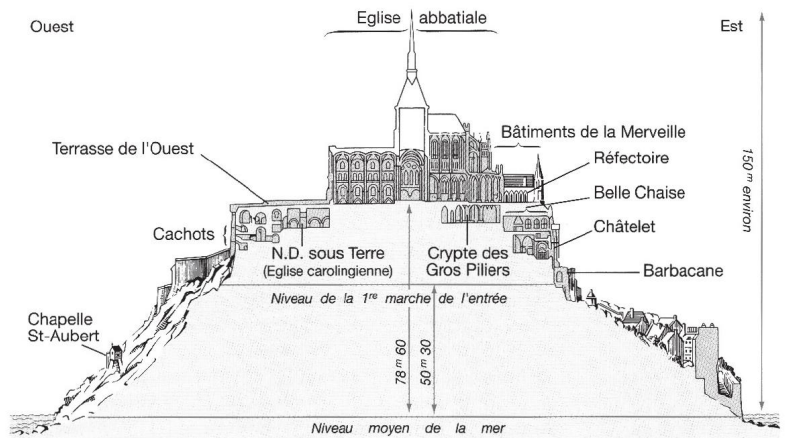
FIGURE 1 Urban development and geology: the Mont Saint-Michel in France. A small settlement around a monastery built on a rock in front of the coast. The settlement and the rock form a magnificent ensemble; the church and steeple enhance architecturally the verticality of the rock amidst the sea water. Walking to the top, you experience the elevation. Above you have a splendid view. (source: Guide Vert Normandie, Michelin 1994)
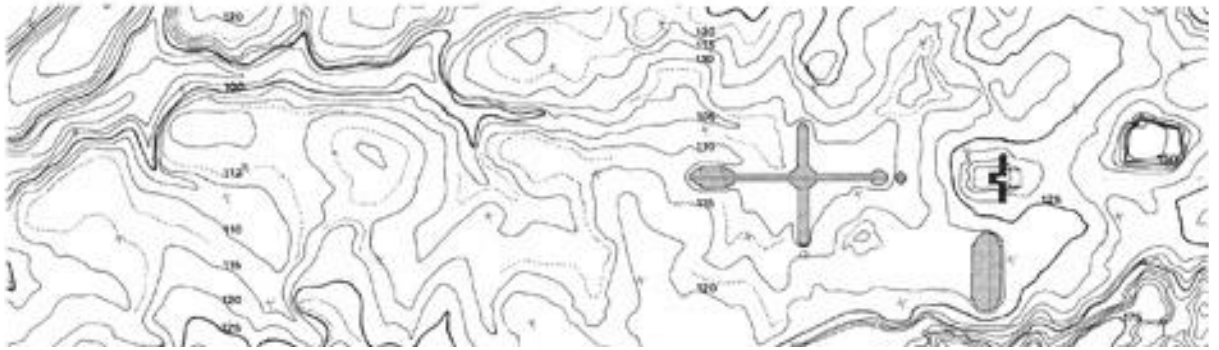
FIGURE 2 The plan for Versailles is based on a careful and distinct working with ground and ground level. The cross section at the top shows how the castle is uplifted to achieve the dramatic working of perspective in the axis of the Grand Canal. The sequence of steps and the "tapis vert" ensure the experience of space, distance, and level (Hazlehurst 1990; Farhat 2006).
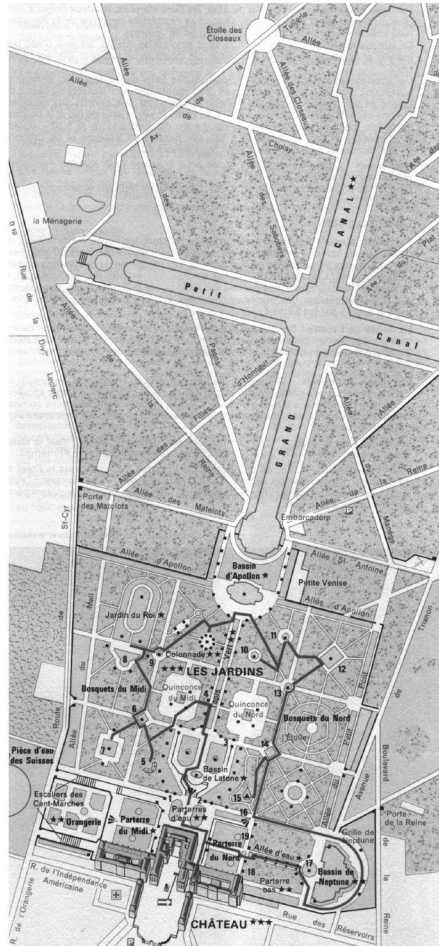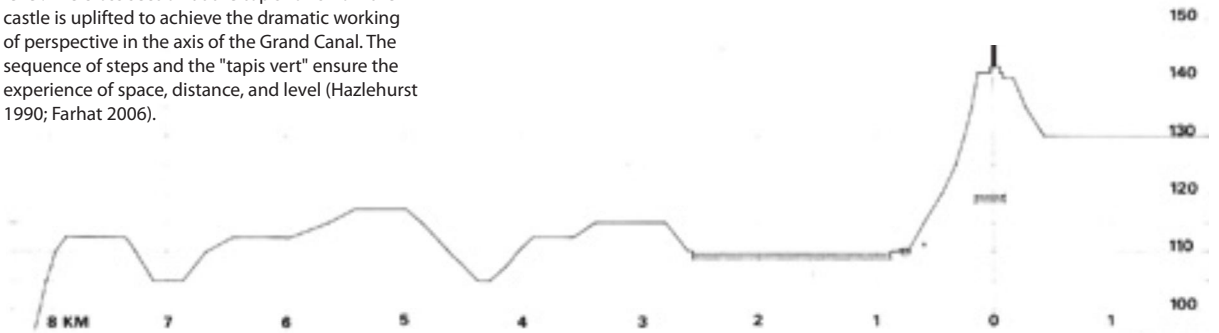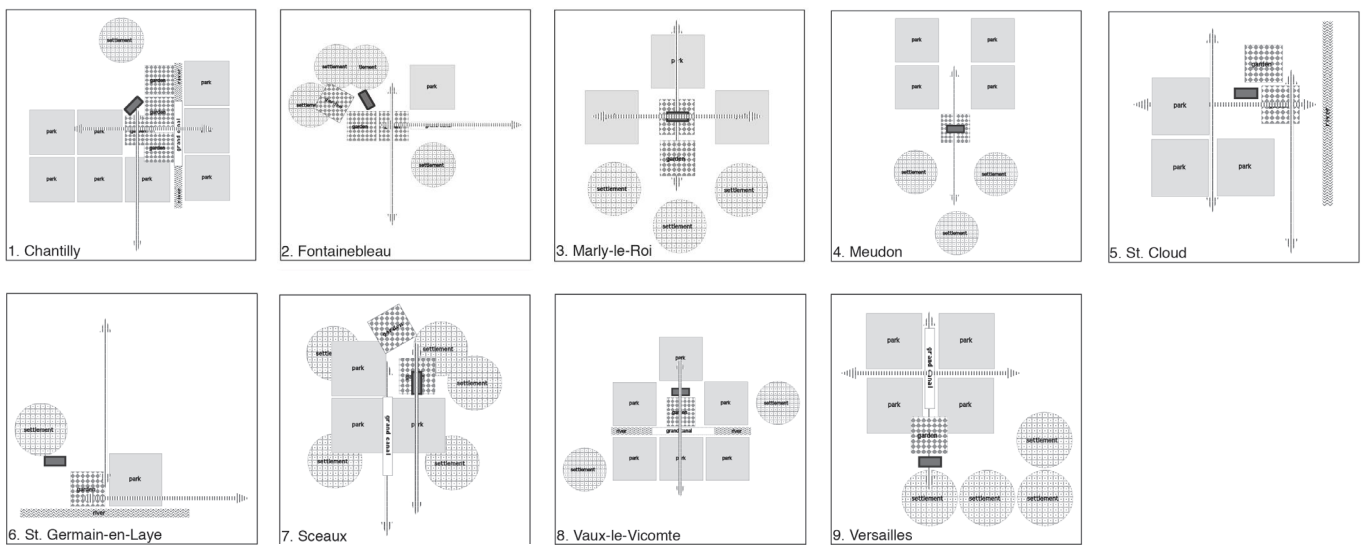
FIGURE 3 Axial structure of castle, landscape, garden, park and settlement in relation to the valleys of rivers in nine plans of Le Nôtre. Only in the case of Sceaux and Versailles, there is no directly visible relation to the river valley. In the seven other cases he worked out different plans with the same elements and principles in an amazing variety. Only in the case of Vaux he started in a situation where there was not an existing castle and/or garden.

In these recent projects we see the working with ground as design material but in contemporary context. New technology of earth moving equipment and dredge machines gives us new possibilities as compared with the historical examples. Yet the plans do have in common a unity of intervention and existing site before intervention that creates a contemporary experience of the land.

In architecture there are many studies on how to deal with the topographic surface in relation to buildings, ensembles, and settlements. In the study of Andreas Ruby and Ilka Ruby (2005) a series of studies is presented of different ways of finding what they call "the mere ground for the figure of the building" and refer to that as "groundscapes." According to the authors, it is a "new condition both for landscape and architecture." The topographic surface is a condition for the building, the ensemble, the settlement. It is a passive use of the ground as surface without interaction between site and program, let alone an integration of existing site and program. In most cases these are examples where the designers work with the site at the level of an image (Burns 2005).

THE CULTURAL DIMENSION OF GROUND

The cultural aspects of ground come back in the language, use, and meaning of places. In Holland, France, and Germany there are also different attitudes to the land which are culturally based.

A special mention has to be made of the terms in French: *terre, terrain, terroir.* The basic term is "terre" which means "earth" both the matter that you can take in your hands and the earth as the global term for the heavenly body we live on. "Terrain" is the same as in English with the same meaning —a defined area in space—but differently pronounced. "Terroir" stands for the combination between the physical soil, the cultivation of the land, and the culture of cultivating that land over a longer time and the products that produce with special taste (Pomerol 1986; Cartier 2004). For "terroir" there is no real equivalent in English or in Dutch and is typically French. It is a term that is extremely interesting for landscape design because it expresses the interaction between man and land in a cultural context. In Germany the ecological movement is very strong, but even more important is what Simon Schama (2004) describes as the "forest culture" (Das Wald) like in the music of Richard Wagner. In Holland the characteristic in this context is the relation to the sea; Holland was and still is a maritime culture (Fernández-Armesto 2001). The relation with the sea is a cultural one that is not only reflected in the making of new land; Felipe Fernández-Armesto uses the term "sea-board civilisations."
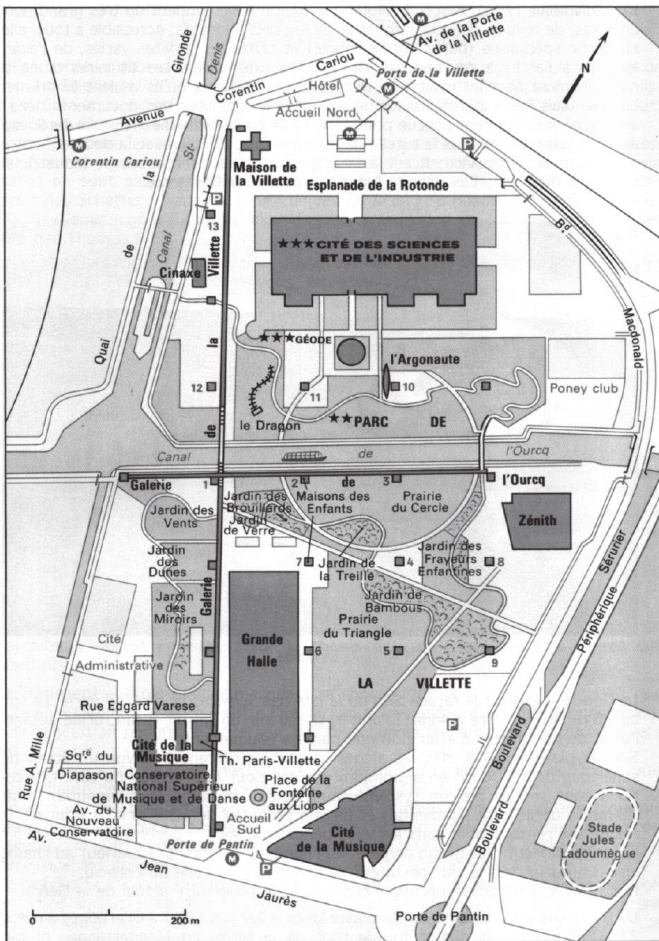
LES FOLIES :

1 - Brasserie
2 - Atelier de vidéo
3 - Halte-garderie

4 - Le Belvédère
5 - Le café « la Ville »
6 - Antenne de secours
7 - Atelier d'arts plastiques
8 - Accueil Zenith

9 - Club de jazz
10 - Folie du sous-marin
11 - L'Observatoire
12 - Kiosque à musique
13 - Cafétéria
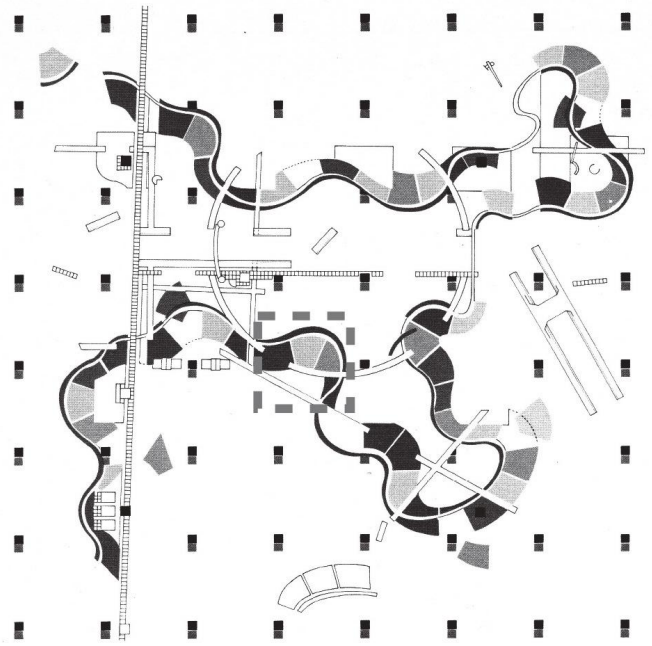
FIGURE 4 Jardin de la Treille, Parc de la Villette, precedent analysis by a student in Versailles (2012). One of the gardens along the "Promenade cinématique" is called "Jardin de la Treille" and was designed by Latitude Nord in Paris (Vigny 1998). The garden is basically a "hole in the ground" that can be seen from different sides and can be entered from the west side. Moreover, bridges that cross it give also an overview from above. When you go down the steps you come into an enclosed space where vines grow on a framework. The enclosed space creates a special atmosphere of intimacy and seclusion. It affords also for other uses like, for instance, concerts and a music band that uses the space for their music rehearsals.

La STRUCTURE du JARDIN
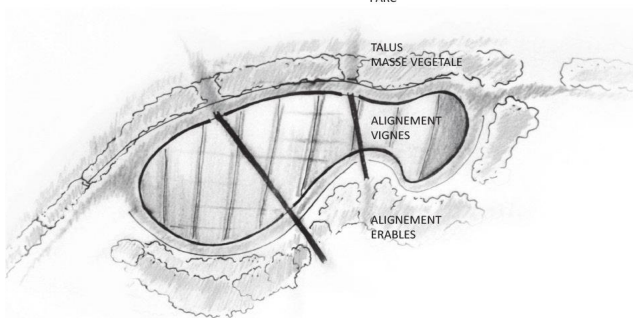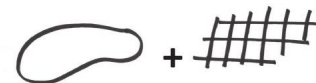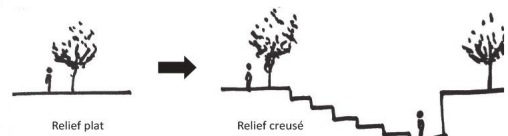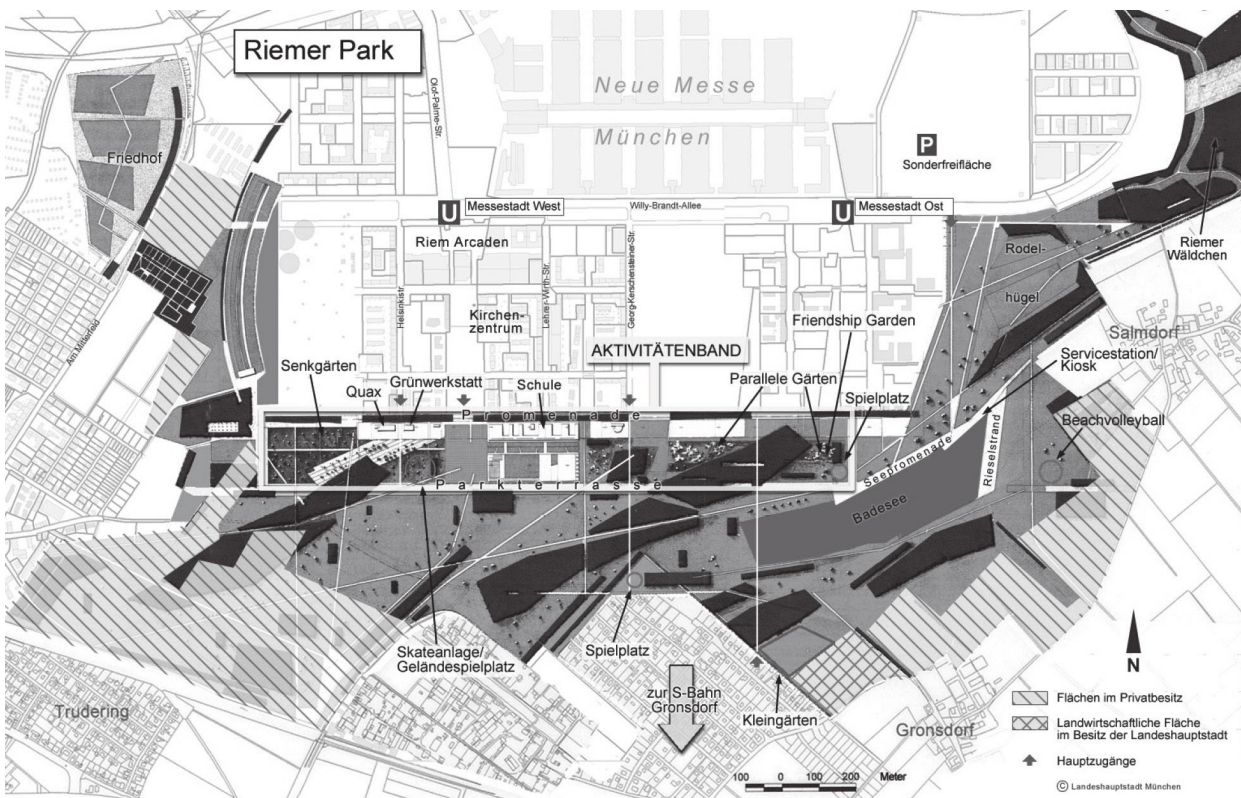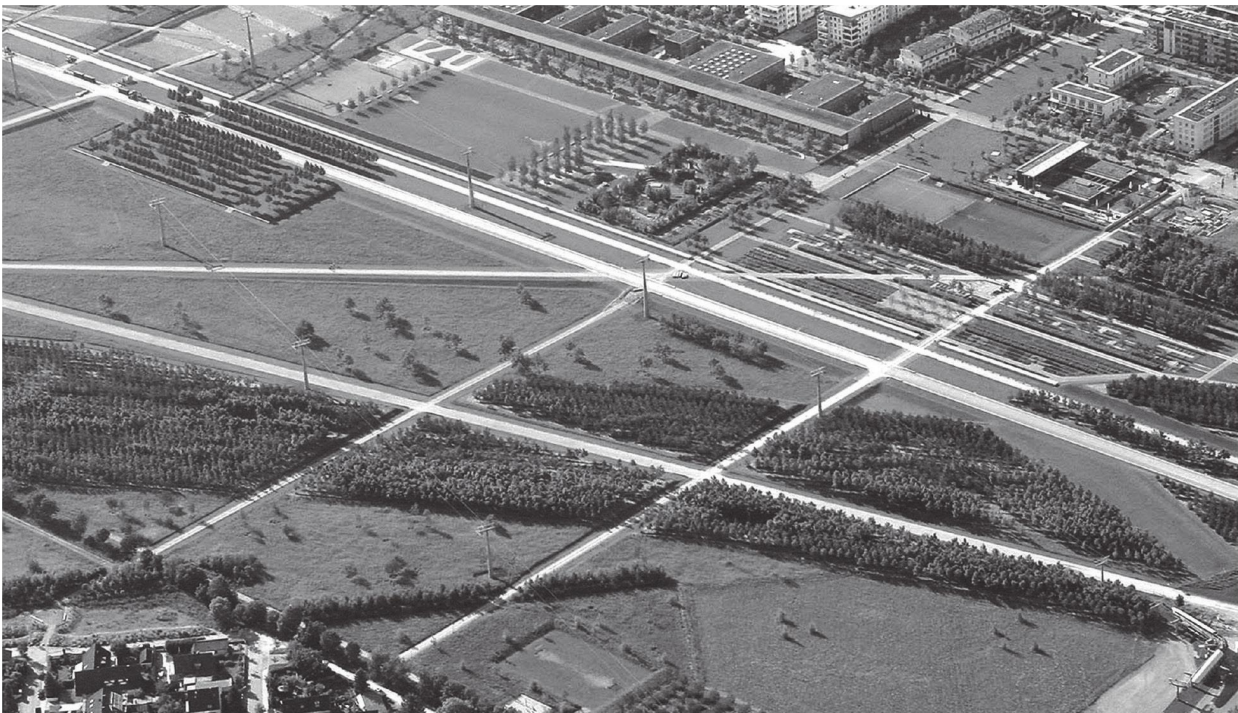
FIGURE 5 Riemer Park in Munich is a new urban landscape of more than two 200 hectares. The plan was the winning entry of an international competition in 1995, and was designed by Latitude Nord from Paris. It was realized in the period from 1997–2005. In 2005 the "Bundesgartenschau" was organized at the site. From east to west runs an activity zone that forms the transition to the new urban development in the north.

CONCLUSION AND DISCUSSION

Ground as fundamental concept in landscape architecture

Ground is not only a starting point of any landscape architectural project, it is also a basic design material in landscape architecture. In this paper we have paid attention to three principles:

- searching the site that offers the demands with regard to soil for the given program and site
- making the site fit for the requirements of the program
- transcending site and program with ground in such a way that both site and program are brought to a higher level of use and experience

"Ground" as design material

Ground is, together with water and plantation, one of the three classic design materials in landscape architecture form the historic times up until the present. It plays a fundamental role, first of all, in the choice of the site but also as design material in grading, leveling, cut and fill, and the dealing with slopes. Basic knowledge of geology is a prerequisite for understanding ecology but also to learn to think and design in landscape architecture.

The need for precedent analysis and development of design knowledge

Ground as a design material is still the same design material as it was 3,000 years ago when the first gardens were made. Technological means of working and, thus, also designing with it has changed to a great extend. Geodesy and the technology associated with it have also changed considerably which means that the use of maps—both analog and digital—have given designers new opportunities. It means that study and analysis of realized plans can teach us a lot; this means a plea for precedent analyzis and development of explicit design knowledge.

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HISTORY AND HISTORICISM IN LANDSCAPE ARCHITECTURE

MARTIN VAN DEN TOORN
TU Delft, Ecole Nationale Supérieure du Paysage de Versailles, Landscape Architecture, The Netherlands, France
m.w.m.vandenToorn@tudelft.nl

Martin van den Toorn is a landscape architect, teaching at TU Delft and at the Ecole Nationale Supérieure du Paysage de Versailles.

CATHERINE SZÁNTÓ
Université de Liège, ENSAPLV Paris, Faculty of Architecture, Belgium, France
catherine.szanto@ulg.ac.be

Catherine Szántó is a landscape architect trained in the United States and in France, presently on a research fellowship in the Faculty of Architecture at the Université de Liège (Belgium).

historicism / archeology / design knowledge / epistemology / conservation / development

INTRODUCTION

Scope and Outline In this paper we want to address the question of history in the context of landscape architecture. Since this is a fairly broad subject, we have distinguished three aspects to focus on: history of the landscape as object of planning and design, history of landscape architectural interventions, and design in the context of history.

Terminology In the research for this paper we found that certain terms, definitions, and meanings were becoming confused. Therefore, we give a short overview of the key terms as they are used in this paper [**FIGURE 1**].
The idea that values change and develop with historical time is by now so much part of common wisdom that it is difficult to imagine a different point of view. Yet the idea is, historically speaking, of fairly recent origin. It began to take shape in Europe as a whole in the seventeenth century, but was not given a consistent philosophical or historiographic formulation until the rise of the Romantic Movement in Germany in the late eighteenth century. In the twentieth century, the Modern movement

HISTORIOGRAPHY

Historiography can be described as the history of and reflection on history.

In headlines a distinction between two aspects can be made.

- The study of history as a discipline; theory, methodology. The history of writing in history, the methods used for analysing and interpreting historical events. The critical examination of sources, describing, analysing and interpreting these historical events.

- The body of historical knowledge on a subject, a topic. The study of a defined subject, a topic or case; for instance: the 'historiography of the industrial revolution'.

The historiography of landscape architecture in Europe is still based on a limited amount of sources like Gothein (1914), Jellicoe & Jellicoe (2006), Mosser & Teysot (1991). These studies are based on original research by the authors and add new information to the body of knowledge.

Other studies like for instance Kluckert (2000) make use of these sources and add only new photographs.

HISTORY

History is the study of the past and the description and interpretation of what happened in the course of time. Interpretation, reconstruction and narration are all part of the work of historians in general. Because history is based on the study of written texts, the use for landscape architecture is limited because of the lack of social and cultural context found in artefacts, objects and other interventions. Historical information needs to be complemented by information from cultural anthropology, archeology, cultural geography like Braudel introduced in the 20th century for instance in his 'Grammaire des civilisations' (Braudel, 2008). Chouquer (2000) has worked out an approach for research of landscapes in which he analyses the agricultural patterns, parcelling and the structure of agricultural settlements. The study of parcelling could also be of great use for the analysis of the form of the landscape as object of planning and design and to gain insight into the development of human intervention.

HISTORICISM

The term 'historicism' originates from the architecture in the 19th century that made use of historical styles like for instance the Houses of Parliament in London. Classicism is a form of historicism in the sense that it refers uniquely to the classics and not to historical styles in general. In landscape architecture we also see this phenomenon especially in the 19th century. Jellicoe & Jellicoe (2006) mention for instance Tsarskoe Selo (St. Petersburg, 18th c.) as example of eclecticism in landscape architecture.

Colquhoun (1989) distinguishes three kinds of historicism based on definitions from the dictionary.

- The theory that all sociocultural phenomena are historically determined and that all truths are relative; this can be seen as a theory of history.

- A concern for the institutions and traditions of the past; this is a viewpoint.

- The use of historical forms; a practice in art and design.

There is no guarantee that the three have anything in common. (…) according to Colquhoun.

FIGURE 1 This diagram gives an overview and comparison of the key terms and definitions that are used in this paper.
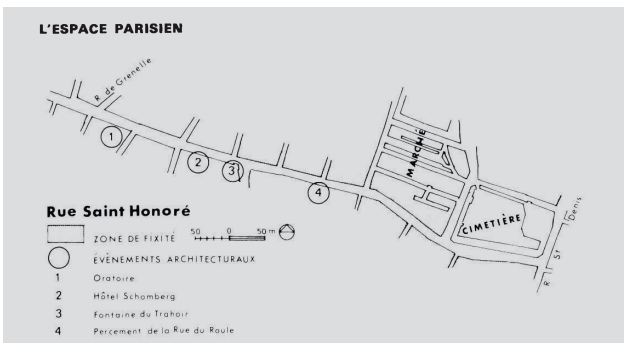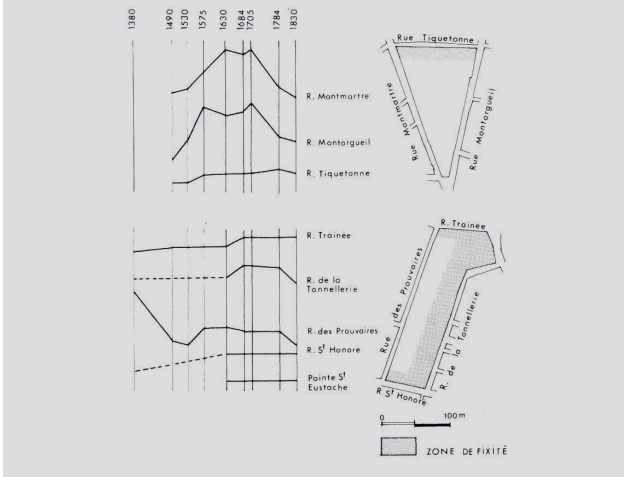
FIGURE 2 The parcel represents the smallest element that unites human intervention and the qualities of the land in a given time and place. Study of parcelling will give insight into the structure of the landscape over time. Since the early nineteenth century parcels had to be described and registered in the cadastre. Francoise Boudon and Jean Blécon (1975) did an interesting study on the development of parcelling in Paris both for the number of parcels and the form of the parcels, and parcelling. How this development of parcelling influenced the urban tissue is shown in the way parcels have changed in form over time, partly due to putting together smaller parcels, partly due to making new roads or new (larger) buildings like churches (Castex et al. 1980). The study shows the continuity of what remains and what changes reflected in the urban structure. For the rural landscape similar studies have been done (Hofstee and Vlam 1952; Bloch 1988; Chouquer 1991).

did away with historicism in a radical way; they were convinced that no inspiration could be found in historic styles or types and that their time needed a new approach to architecture and the visual arts.

PRACTICE AND HISTORY

Landscape architecture, like all areas of human endeavors, has its own history, but its relationship to it is ambiguous, multi-dimensional, and fluctuating, partly because the object itself has been changing.

The study of garden history began rather late as a subdiscipline of art history. The earliest discussion used examples from the past to promote contemporary design by opposing it to those of the past or presenting it as their necessary and welcome development. The first real treatise in France on garden history was published in 1887 (Mangin 1867). Others followed, such as for instance Marie-Luise Gothein (1914) in Germany. Today many books on garden history are written for cultivated amateur readers. While there are academic monographs on specific aspects of garden history (garden history in a given country, limited to a period or a style; biography of a noted landscape architect), there is hardly any overall garden history with academic ambition like (Mosser and Teyssot 1991; Hazlehurst 1990; Moore et al. 1993). An archeological and ethnographical approach (in the widest

sense of the word) is also required, such as that proposed in France by Gérard Chouquer (1991). The integration of "cultural landscape" as a category of world heritage by UNESCO has emerged the need of developing a different paradigm for dealing with the history of living, evolving, objects (Tricaud 2011). How and why landscape architects have made use of historical information is first of all approached from studies on the history of landscape architecture and projects in which history was a determining factor.

HISTORY OF THE LANDSCAPE AS OBJECT OF PLANNING AND DESIGN: FROM MAKING ARTIFACTS, ENSEMBLES TO THE CREATION OF ENVIRONMENTS

All design in landscape architecture is a matter of transformation of the existing site. Contrary to architecture, in landscape architecture you cannot intervene without knowing the existing situation so both intervention and the existing site are always part of the design process.

Studies on the history of landscape architecture range from "timelines" to broad descriptions and interpretations. Timelines like William A. Mann (1993), Elizabeth Boults and Chip Sullivan (2010) merely put projects in a context of time and space. A more extensive approach can for instance be found in Geoffrey Alan Jellicoe and Susan Jellicoe (2006) in their *Landscape of Man;* each chapter in the first part is
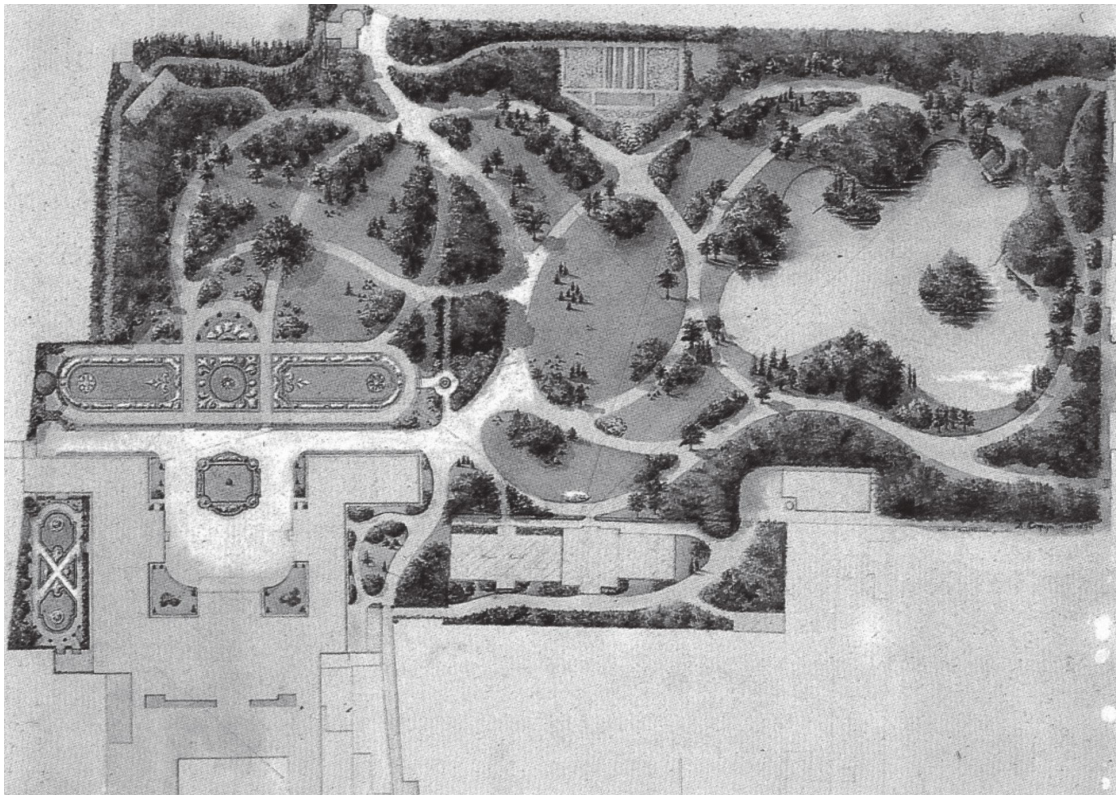
FIGURE 3 An example of a transformation of a garden in a classical style into the landscape style. The garden belongs to the royal palace "Noordeinde" in the Hague (Holland). The former axial system is still visible in the overall layout, but is superimposed by the curvilinear pattern of the landscape style. The plan was made by Copijn Landscape Architects but was never realized (Oldenburger-Ebbers et al. 1995).

organized along the same outline of: environment, social history, philosophy, expression, architecture, landscape and thus, putting landscape architectural interventions in a broader context of society and culture.

In parallel to the widening scope of landscape architecture (from private gardens to public parks and landscape), the study of its history has also widened its scope. Gardens are viewed from the side of social and cultural history, history of technology, institutions, territorial management (for instance, Charles Quest-Ritson [2003] for English gardens or Carla S. Oldenburger-Ebbers et al. [1995] for the Dutch landscape). Catherine Szántó (2009) did a historiographical analysis of the study of the gardens of Versailles, which is quite revelatory of the widening scope of garden historical studies (Szántó 2012).

Szántó (2009) has studied the use of the Versailles gardens by contemporary visitors especially the "leisurely walkers." In her study she makes clear that such an activity already existed in the time of its creation by the King and his guests but that contemporary walkers can build up a new "meaningful aesthetic experience" by means of a "spatial dialogue." So here past form and, nowadays, experience is related to contemporary use; the same form giving rise to new experiences in a contemporary context. This is studied by means of a special research technique of visual analysis (Szántó 2010, 2011).

HISTORY OF LANDSCAPE ARCHITECTURAL INTERVENTIONS: THE ROLE OF TECHNOLOGY AND SOCIETY

Interventions always have a dynamic character since you also intervene into the natural system. The type of interventions changed over time due to two major influences. First of all the changing view of the landscape from a social point of view. This attitude that developed gradually from the seventeenth century to the nineteenth century also influenced the interventions; from creating contrast between human intervention and natural context like in the baroque gardens to inserting into the natural context in the landscape style. Secondly, the development of science and technology also changed interventions. In Holland the technique of polder-making was first of all influenced by technological developments like the windmills and later on steam engines and electrically powered pumping stations. The large polders in the twentieth century were all drained by means of electrically powered pumping stations. It means that the newer technology enabled larger sizes of the polders (Lambert 1985; Ven 2004; Geuze and Feddes 2005).

Not only have steam engines changed interventions in the landscape but also other technological developments like the introduction of barbed wire, artificial fertiliser, ground moving equipment, hydraulics, and road building techniques, all have changed the scope, scale, process, and content of

interventions. For landscape architecture, the study and analysis of the parcel and parcelling gives many clues to how man has intervened in the landscape both in the rural and the urban landscape [**FIGURE 2**].

DESIGN IN THE CONTEXT OF HISTORY: THE EMERGENCE OF DESIGN KNOWLEDGE

History is always part of the design approach in landscape architecture since every project starts from an existing site that has a history of its own. Over time, the site has always been a point of departure, making it distinctly different from other design disciplines. Knowing the site both as a natural system and as a socioeconomic system is the start of any design project. The way history influences a design approach is also dependent on the program and the design idea developed in the project by the designer(s). In some cases, history is a determining factor for the design approach like in all cases where restoration or reconstruction plays a role.
In the course of time, when more and more plans were being made, a second type of transformation emerged: the transformation of former plans. Especially from the eighteenth century on in Europe, nearly all baroque gardens were transformed into a landscape style [**FIGURE 3**].
In the present time, with its prepossessed admiration for anything historical, it is hard to imagine what happened with the classical gardens in the nineteenth century; today this would be impossible even to discuss. In the twentieth century there have also been examples of transformation of existing plans not on the basis of style, but on the basis of a new program. In general, design in the context of historicism distinguishes different types of approaches relating to history or the existing: preservation, reconstruction, restoration. Historical preservation is distinct from historical reconstruction and restoration. Restoration of buildings and ensembles can be done but restoration of landscapes is impossible since you cannot reconstruct the context, and landscapes change even if man does not intervene.

HISTORY AND THEORY

How did design knowledge evolve? The history of landscape architecture in its contemporary form has evolved over thousands of years from the making of gardens to the

creation of landscapes (Jellicoe and Jellicoe 2006). In the history of the landscape as object of planning and design, different approaches evolved over time: from garden to landscape, from private to public, from production to leisure. This evolution is first of all determined by developments outside the discipline like society and technology, and is visible in the realized projects over time. It has been primarily practice that gave form to the materialization of these developments outside the profession.

History and precedent A continuing discussion in all design disciplines is, if and in what way, earlier design experience could be used. In this context the term "precedent" is mostly used. The Modern movement did away with all experience from the past; according to them, art and architecture had to be reinvented on the basis of the new materials, new ideas that had emerged in the beginning of the twentieth century (Doesburg 1983). The influence of the Modern movement on landscape architecture has been limited. First of all because landscape architecture did not have this emergence of new materials like in architecture, but also because very few landscape architects were involved in the Modern movement. There certainly has been influence on the way the program influences the design.
At TU Delft in the Faculty of Architecture, Ali Guney (2008) developed the existing plan-analysis into an approach based on an explicit analytical framework which he called "precedent analysis." He elaborated on the work of Alexander Tzonis in Delft who was the first to coin the term in the context of design (Tzonis 1992). Precedent analysis is the systematic analysis of plans based on an explicit analytical framework. The background idea is that the results of such precedent analysis are a form of generic design knowledge that can be of use in contemporary design.

History and Readability, Identity "Readability" and "identity" are related but not the same. Identity is related to the landscape, whereas readability seems to refer to a human capacity of more or less being able to interpret and understand the landscape.
Identity refers to landscapes that are more or less authentic over a certain period of time. It is typically the result of a

way of thinking in the process of globalization where landscapes seem to become all the same as elsewhere. All landscapes that have a visible historical character do have identity. But identity is not only based on historical features but can also refer to a contemporary landmark like, for instance, the Erasmus Bridge in Rotterdam which works as an icon for the city, thus supporting its identity. So historical character seems to underpin identity but there are also other phenomena, characteristics, that can support identity.

CONCLUSIONS AND DISCUSSION

Historical analysis and insight can contribute to design knowledge, but it needs to be abstracted to the design principles. Historical study in landscape architecture cannot only be based on texts but should also comprise the study of artifacts in their context of space and time like in archeology and in the study of cultural and social context.

At the moment, there is a need for a study that focuses on the European history of landscape architecture that takes into account the rich cultural diversity and the influences from outside Europe.

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DESIGN AND CRITICISM OF ATMOSPHERES IN LANDSCAPE ARCHITECTURE

JÜRGEN WEIDINGER
*Technische Universität Berlin,
Department of Landscape Architecture,
Germany*
j.weidinger@tu-berlin.de

Research interest: design theory and
methodology based on perception
and atmosphere theories, research
through design epistemology. Pub-
lications see http://www.entwerfen.
tu-berlin.de/index.php?id=1629.
Director of WEIDINGER LANDSCAPE
ARCHITECTS, landscape architecture
firm focused on urban public space,
see www.weidla.de

design theory / spatial quality / atmosphere / urban public space

DEFICIT IN THE THEORY OF LANDSCAPE ARCHITECTURE

Criticism and theory of landscape architecture have a sub-
stantial shortcoming in relation to the systematic descrip-
tion of aesthetic and atmospheric qualities of urban public
spaces. This deficit is revealed in the fact that the current
discourse on landscape architecture is mostly dominated by
functional aspects. It is relatively easy for nonexperts in
design to understand functional requirements and evalu-
ate the implementation of them. It is much more difficult
to reach an aesthetic judgment on the quality of a space. This
is due to the lack of theoretical models and related criteria.
It should be an important task of current landscape architec-
tural criticism to develop suitable models.

How can we describe spatial qualities in a replicable way? To
solve this issue, input is required from two sides: from the
sciences and explicit knowledge, and from designers and im-
plicit knowledge of design. Landscape architecture in acade-
mia is currently dominated by scientific disciplines which,
by their very nature, tend to a great extent to make statements
on functions and measurable quantities. However, these
auxiliary disciplines, that is, biology, law, economics, make
no statements on aesthetic quality. Also garden history and

FIGURE 1 Atmospheric theme: wild and adventurous subtropian forest, Gulbenkian Park in Lisbon, Portugal, designed by Gonçalo Ribeiro Telles in 1969. Photo taken by the author.

landscape architectural theory today are little focused on systematic models of spatial quality.

Therefore, it is necessary to activate designers' implicit knowledge. I approach the issue of aesthetic qualities as a designer working in academia, and the aim is to make implicit knowledge, or know-how, explicit as know-what. For this, I analyzed design processes and designs in relation to this issue. Later, the descriptions that have emerged through this process have been sorted and compared to concepts of explicit scientific theory in order to pinpoint congruencies and discrepancies. In this way, a model for the description of aesthetic qualities can be developed which brings together relevant contributions from explicit and implicit knowledge. I have termed this approach "design-based theory," echoing the term "research by design."

SPATIAL QUALITY AS DESIGN THEME, EXPRESSION AND ATMOSPHERE

I propose the hypothesis that the design of urban public space is closer to scenography and stage design than to biology or sociology. In this field of design, a generalized quantifiable manual does not exist. Depending on the site and its context, a public urban open space can be designed, for example, as a beach, a forest, a promenade, with loud or quiet background, and so on. The often-inept project requirements stipulated by demands from health, safety, ecological diversity, or gender equality do not deliver a sufficient basis to develop a design solution. The reason for that is that the design process in general can be described as a "wicked problem" (Rittel 1969). A wicked problem cannot be solved using scientific methods but only by the application of design procedures. This means in order to limit the infinite formal options available in the design process, it is necessary to introduce a subjective aesthetic design theme. A design idea of this kind is essential to enable the designer to understand functional requirements and solve them.

The specific skill of design comprises the creation of a particular compositional coherence that gives expression to the design theme selected. Good designers have a comprehensive knowledge of precisely how to create expressive spatial compositions. Designers use terms such as design motif, design theme, expression, or atmosphere in order to control and intensify the selected aesthetic impact of the design. This is the crucial starting point to examine the creation of aesthetic impacts. I have selected the concept of atmosphere from this list of terms for further examination of the topic, because in the language of designers and in everyday speech, atmosphere no longer simply refers to the subjectively selected design theme, but the term atmosphere describes a generally comprehensible quality.

FIGURE 2 Implementing the theme in the space by shadowy vegeation and bright clearings, Gulbenkian Park in Lisbon, Portugal, designed by Gonçalo Ribeiro Telles in 1969. Photo taken by the author.

GUIDELINE FOR DESIGN AND CRITICISM OF ATMOSPHERES IN LANDSCAPE ARCHITECTURE

I propose a guideline for the design of atmospheres for urban public space. This guideline enables the designer to monitor the creation of atmospheric effects and to analyze the atmospheric quality of design proposals and implemented projects. All levels serve to intensify the impact of the design theme selected within the first level. Atmospheric intensity is achieved when the space conveys unisonous contents of perception to the visual, auditory, tactile, and olfactory senses, and the sense of temperature and balance. Those perceptions cause experiences, which are related to the design theme. The atmosphere of the space is first unwittingly sensed and later, if the visitor is open to contemplate on the impacts triggered by the design, the atmosphere of the designed space can also be cognitively understood. The guideline comprises a series of decision levels leading from the whole to the parts.

Finding an Atmospheric Theme for the Space

As the designer approaches the site at the beginning of the design process, initial theses are formulated on the future atmosphere to be designed. These theses can be sketched in words or through pictorial structures, pictures, or collages. The atmospheric theme reacts and refers to the site and its physical and mental context, emphasizes existing qualities, or adds a new quality to the site. The reference of the design theme to the site creates the basis on which the selection of the theme can be made comprehensible. If it is not easy to find an atmospheric design theme at the start of the design process, the designer tests initial composition approaches and investigates ways of solving functional requirements. This process reveals reasons for the choice of the atmospheric theme that can be shaped further during the next steps.

Implementing the Theme in the Space

The next step is to test the atmospheric sketches by implementing them on the site using spatial elements of landscape architecture. Coherent results, that is, compositions in which the theme aimed for is perceptible, are selected and developed further. Certain arrangements of specific spatial instruments create particular aesthetic impacts. It is amazing how countless conceivable atmospheric motifs can be realized despite the rather limited repertoire of spatial design elements such as topography, vegetation, steps, walls, and so on. Everyone is sensitive to the aesthetic impacts of spatial situations. Designers make use of this observation and develop a particular interest in spatially effective compositions, collect and sort them. Theories of *Gestaltung* (Klee 1925; Meisenheimer 2004; Wilkens 2010; amongst others) provide terms to describe design principles and elements, that is, contrast, symmetry, wideness and constriction, threshold and vistas, which can help the designer to control spatial compositions and achieve distinct atmospheric impacts. By the way, it is remarkable that only a few of those authors deal with the topic of designing atmospheres.

Staging Movement in the Space

Designing movement in space has excellent potential from the point of view of atmospheric effects. The purpose of this design level is the creation of spatial situations that motivate various movements through the site. There is a wide range from direct links to pleasant detours and areas that the visitor cannot access, such as water surfaces or topographic features. Paths guide us through the space, reveal or hide views, arouse curiosity or promote encounters with others. On the one hand, designing the movement options is very closely linked to the level "Implementing the Theme in the Space,"

FIGURE 3 Staging movement in the space: following the paths offer surprising sceneries, Gulbenkian Park in Lisbon, Portugal, designed by Gonçalo Ribeiro Telles in 1969. Photo taken by the author.

because the design of the space induces the movements of the people. Taking this idea further, the designer can initiate slow or rapid motion, for example, by the design of paths as well as by the choice of surface materials. This reveals the link to the next two levels and indicates the fundamental principle that all design decisions at all levels should be very closely coordinated.

Integrating Ways of Using the Space
Functionalist design approaches impose everywhere the same familiar modules for use, whereas the design approach of designing atmospheres searches particular options for the use of space following the atmospheric theme. In that way, the aesthetic impact is enhanced, and surprising new elements can be introduced to urban public space. This relates to the selection of spatial stimuli for the use of the space, the specific placing, and the particular shape of the spatial stimuli. The example of different ways of sitting illustrates the potential of placing spatial stimuli for usage. Sitting by the path, sitting in the middle of a wide path, or sitting far from the path provide different experiences of the space and of other people around.

Emphasis through Design Details
Finally, the atmospheric impact is intensified by designing the details. The detailing of spatial elements, ground coverings, and of spatial stimuli for usage, should be enhanced in relation to the atmospheric theme. This refers to the selection of materials and vegetation, to the way the materials are composed, to the selection of colors and of the qualities of light, and to maintenance instructions. Distinct atmospheres such as the atmosphere of a post-industrial heavy metal park, a listed park next to a historic palace, or a delicate lily

garden require distinct detailing in line with the theme. At this level, visual perception can be further colored, tactile perception can be further molded, and auditory perception can be further composed until the atmospheric theme can be experienced with all senses.

RELATION TO EXPLICIT SCIENTIFIC THEORIES
The guideline aims to create atmospheric impacts that cannot be measured but can only be described in terms of quality. Of course it is beyond the scope of this paper to give a complete list of concepts developed in explicit scientific theory to define quality. Therefore, I will substantiate the relevance of the proposed design guideline with the help of some selected descriptive models of quality. Models from empirical psychology are particularly suitable for this purpose and where empiricism cannot be applied systematic perception and theories of experience from the humanities may be considered.

At the end of the nineteenth century, psychology developed the theory of Gestalt in Berlin and Vienna (von Ehrenfels 1890; Köhler 1992/1947; Wertheimer 1967/1923; amongst others) while holistic psychology was developed in Leipzig. Both concepts succeeded the previously dominant associationist psychology. Instead of focusing on single and quantitatively determined aspects of the perception process, the interplay of these aspects as a quality became central. Later and built on these findings, variations of empathy theory (Wölfflin 1999/1897; Lipps 1897; Vischer 1872; amongst others) applied the concept of holistic quality in the analysis of art works and architecture. The laws of Gestalt, originally set up in the field of psychology, have been developed into the tool of the Gestalt qualities to describe quality in the design disciplines and specifically in architecture

FIGURE 4 Implementing meaningful ways of use, Gulbenkian Park in Lisbon, Portugal, designed by Gonçalo Ribeiro Telles in 1969. Photo taken by the author.

and film (Arnheim 2009/1977). Attitude research, a second generation of psychological research in the mid-twentieth century, was also concerned with aesthetic impacts. With the aid of the semantic differential (Osgood, Suci and Tannenbaum 1957) the aim was to determine quantitatively the emotional impact of artworks. Attitude research in the last century reduced aesthetic impacts to a few attributes and is therefore not suitable to adequately describe the wide range of aesthetic qualities in artwork and public urban open spaces. Psychological aesthetics today, that is, the research project Psychological Aesthetics at the University of Vienna, follows a more complex approach in the research into the biological fundamentals of beauty, attractiveness, and the impact of artworks and is therefore adopting theories of evolution, cultural psychology, and aesthetic experience (IPGF 2013). In the humanities, holistic qualitative phenomena have been addressed by a range of models. These include: abduction (Pierce 1997/1903), pervasive quality (Dewey 2013/1934), total quality (Klages 1923), tuned space (Binswanger 1955, 174-225), moods (Bollnow 1995, original), Hubert Tellenbach's term *"Umwölkung"* (clouding) (Hasse 2013), Willy Hellpach's term "atmospheric harmonies" (Hasse 2013), and above all, the theories of atmosphere (Tellenbach 1968; Schmitz 1969; Böhme 1995; Thibaud 2003). Within the scope of these concepts, an evolution of the term Gestalt into a concept of atmosphere or a concept of presence can be recognized. Theories of atmosphere emphasize the lived space, which is characterized by topological relations rather than by quantifiable dimensions. In these theories the movement of the body through space plays an important part in the perception of the space. This is described by Willy Hellpach as *"Ergehen"* (sensing through walking) (Hasse 2013), by James Gibson in his ecological approach of

perception theory (Gibson 1975), and by "action in perception" through the perceiver who is active or moving (Noe 2006). Following, Alva Noe, not only pre-linguistic sensing but also reflexive aesthetic judgment depends on movement.
The interplay of the senses is described as synaesthetic perception (Boehme 1995, 90-94) or multi-sensory perception of trans-modal qualities (Schoenhammer 2009, 228). The phenomenon of immersion (Grau 2003) and its application in the form of immersion art denotes the effect of plunging in or being drawn into digitally created environments. The effect of immersion also applies to spatial design and the design of atmospheric space (Kuhnert, Ngo, Becker and Luce 2006, 24). The concept of presence (Gumbrecht 2004), a non-hermeneutic concept of experience, is worth exploration to improve the theory of atmospheres in space.

CONCLUSION
The comparison of the design guideline with some models from explicit scientific theory creates two results. First, the design guideline can be substantiated. On the other hand, suggestions for some scientific disciplines can be made, which originate in the design process itself and ensure an appropriate approach to the phenomenon of spatial atmosphere. The combination of implicit and explicit design knowledge intends to provide a model for the design and evaluation regarding atmospheres in urban public space and to answer the deficit in landscape architectural criticism.

FIGURE 5 Achieving emphases through design details: rectangular paving structure in contrast to abundant vegetation, Gulbenkian Park in Lisbon, Portugal, designed by Gonçalo Ribeiro Telles in 1969. Photo taken by the author.

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NATURE HAPPENED YESTERDAY
BACK TO NATURE IN MEGACITIES

COMMENT BY JORG SIEWEKE, BERLIN/VIRGINIA

This session, "Nature Happened Yesterday," provided thematically different yet conceptually related case studies, situating the discipline of landscape architecture between the moving targets of nature and culture. This review suggests correlating the individual contributions and providing a frame of reference for them.
The subject of the call for this session, "Nature Happened Yesterday," describes the territory as follows: "More than other disciplines, landscape architecture has always been concerned with the link between scientific and artistic practice. Its role is to understand nature in all her complexity and to make visible our interactive embeddedness in nature." (ECLAS Conference 2013 call for papers) How does the panel address the role of landscape architects in today's anthropocene condition?
The first presentation, "Traumatic Urban Landscape" by Jörg Rekittke describes a sequence of three visits the graduate studio made to Jakarta. As a learning curve towards "embeddedness," the students were to learn from the humility of the residents, and adapt to the river's "unforeseeable" dynamics. The studio didactic suggests immersing the students into the everyday lives of the people and understanding their situation, attitude, and limited choice.
But can the mindset of post-traumatic neglect regarding an inevitable destiny be an adequate model for a city that continues to sink in subsidence?
"Following the intriguing mindset of the local people, our project does not see flooding as a problem, but as a potential motor for adaptation and change."

JORG SIEWEKE
is an urban designer and landscape architect from Berlin. He has taught at TU Berlin, ADK Stuttgart, RWTH Aachen and TU Dresden. Since 2009 he serves as Assistant Professor in Landscape Architecture at the University of Virginia, where he directs the design research initiative, "ParadoXcity."

Rekittke proposes to train a new breed of "shock resistant" landscape architects for an environment that is beyond description—people literally living in the river that also serves as the raw sewage and garbage dump for the entire city.
The first studio visit was initially aimed at raising awareness and resulted in onsite interventions. The second studio visit addressed the resilience of people living in the river and subsequently returning to their flooded homes, which have been handed down from generation to generation.
"Likewise, the January monsoon contributed to the collective enlightenment. Jakarta was hit by another cataclysmic flood; our students didn't hesitate to book flight tickets and head right into the flood. That was the moment when they grasped the landscape project in all its physical dimensions." (Rekittke)
Rekittke showed images that reference platoon helicopter landings and boots on the ground as a military metaphor for local engagement. During the talk, he responds to a peer review comment which questioned the Vietnam War reference. Rekittke argues that the challenges in Jakarta left no room for political concerns, correctness, or politeness. Moral standards such as these were concerns of the western world.
The method deployed is a consequence of the "data-poor environment." Since no remote sensing data is available, the students take measurements and make drawing sections onsite. This survey results in a "Horizontal Urban Trim Line" of

the maximum flood line, as a datum projected and marked in the physical space. Without getting into the specifics of what may cause or determine the flooding, this research focuses exclusively on the flood as a given phenomenon and on its effects. The work faces the symptoms, but does not address the systemic causes of problems behind them. Only the symptoms themselves are investigated, rather than taking an outside, expert perspective and beginning to understand the origins of these circumstances as man-made management of the territory. The focus is on the particular culture that cannot escape its own destiny. Despite re-occurring floods and destruction, the residents have repeatedly returned to their flooded homes and continue in this manner, without an alternative perspective.

"The local residents contributed to the installation and enjoyed it. The urban ecology of the contemporary city must be collectively understood, in order to find flexible strategies of adaptation instead of relying on costly Byzantine engineering solutions." This perspective appears to be radically fatalistic and celebrates the utmost resilience and adaptation; it also assumes that the profession would learn from the adaptation to the catastrophic conditions, rather than providing a solution that would contribute to improving them.

Rekittke appears to celebrate the local adaptation and discredits structural or infrastructural approaches as "costly Byzantine engineering solutions."

At the same time, the initial research of the territory indicates that the ground level of Jakarta will continue to subside at staggering rates. The attitude of accepting and living with the floodwater will soon no longer be viable—even with Jakarta's standards of adaptation and tolerance to the extreme conditions outlined in this paper.

The images of children cheerfully playing in the sewage and trash-laden water, which they can barely stand, cannot neglect its limits of resilience.

Rekittke proposes to comply with the "theater of operations" and sees value in the students he has educated to be "disaster ready."

Comprehending this culture of compliance is certainly a challenge and also a prerequisite, but should it exclude one from studying the river's hydrological regime, watershed, or infrastructural conditions and constraints?

NAVIGATING POST-NATURAL LANDSCAPES:
JAKARTA AS THE CITY OF THE ANTHROPOCENE

The Architecture + Adaptation: Designing for Hypercomplexity Research Initiative by Dr. Etienne Turpin.

The work presented here raises the question of agency for the designer and how it might take effect beyond the studio. "As architects and landscape architects struggle to find ways to exercise agency through socially and environmentally responsible practices, and as the design disciplines attempt to reorganize their commitments in the face of ecological collapse, the Architecture + Adaptation Research Initiative mobilizes collaborative, engaged, and situated research to advance the

pedagogical model of architecture education beyond the studio, and to build new connections for post-natural design in environments of hypercomplexity."

The approach is presented with theoretical attributes of the "anthropocene," "hyper-complexity," and "post-natural condition." The research emphasizes tools of mapping and diagramming to help local communities understand the territorial and infrastructural underpinnings of their situation.

Turpin takes a position that the research conducted can be a contribution to communities that would otherwise not have access to that information. It was also stated that the information would empower certain disadvantaged groups to articulate their situation as being marginalized, and provide a path for them to take action and claim environmental justice.

The project outcomes were presented by the panelist by means of a video rather than a live in-person presentation, and did not take full advantages of being present in Hamburg.

The panel featured a debate on the two perspective of the role of a studio—embeddedness versus empowerment, with each proponent justifying their own approach as relevant and adequate. The conversation continued and could not be resolved by the end of lunch.

PARADOXCITY NEW ORLEANS—THE PERSISTING BEAUTY OF NON-STRUCTURAL SOLUTIONS BY JORG SIEWEKE

The panel allowed comparing the Jakarta discussion with a third research agenda, related to cities on rivers that are subject to flooding. Different form Turpin and Rekittke's Jakarta case study, Sieweke's perspective on Delta Cities benefits from the well-documented "old world" cases of New Orleans and Venice.

Building on the research conducted in post-Katrina New Orleans, and the comparatively slow, but persisting rise of aqua alta in Venice, the work is focused on understanding and unpacking the roots and source of these problems. These are complex, but manifest themselves in infrastructural and regulatory frameworks of the rivers' hydrology. While assuming the best intentions of providing flood protection and navigation, it becomes obvious that the unaccounted for side effects of this management are the reason why Venice and New Orleans are actually sinking, rather than being subject to rising sea levels. Meanwhile, the effects of erosion, subsidence, and the misreading of the course of the rivers far exceed the threat of a rise in sea level. One can learn here to reflect on the approach to and quality of adaptations and innovations, especially in respect to infrastructural systems. To what extent do they provide good, long-term solutions, or will they turn out to be ill-conceived maladaptations? A reflective approach to modernization would revisit failed projects in particular, and not only investigate their structural soundness, but also assess whether the original assumptions and predictions were accurate or need to be reconsidered, in some cases on a fundamental level. Ultimately, it is a matter of being wiling to learn from failure and to take

note of and appreciate critical voices: alternative solutions that may have been proposed in the past, but were not heard for a variety of reasons.

The role of the landscape architect in this paper is more a critical generalist who reflects and evaluates the path of modernization as a history of ideas. This history is not viewed as linear, but as a matrix of modernization to be unpacked in order to learn how to better design future adaptations.

BREEMWAARD

The development of the Breemwaard introduced by Rudi Van Etteger allows for reflections on the nuances involved in assigning natural values to an area slated for transformations.

Van Etteger addresses the shifting biases of nature implicit in the Breemwaard project, in which he was involved first hand as project landscape architect with ARCADIS.

His presentation reflects on the contradicting ways of defining value in nature for the Breemwaard project. The original intent was to alleviate flooding by turning higher agricultural land into lower lying floodplains by excavating soil and clay. The resulting lowered landscape was intended as part of the "room for the river" strategy, and to offer habitat to favor rare open meadow species. However, the grazing that was necessary to maintain the meadow began too late, and a successional soft wood forest began to emerge. The initial, ecological intention was superseded by the rapid succession. Despite this mishap, the emerging successional forest is greatly appreciated by residents, who come to enjoy an area that is not laid out like a park with pathways, but is seen as "wild" due to its deliberate lack of maintenance.

The author surreptitiously criticizes the prescribed ecological goals as somewhat arbitrary. They seem chosen, in order to reveal other commercial interests such as excavating aggregates.

A similar condition can be assumed for a related, but much larger, project known as the "Grensmaas," which is currently underway along the Dutch-Belgian border. This project is part of the larger deregulation strategy, "room for the river," and is presented as a win/win coalition of both flood protection and ecosystem restoration. At first site there is a full-scale gravel extraction industry at work on the construction site. In a similar manner, the river profile is widened at sacrificing the loss of meters of very valuable agricultural topsoil. Gravel excavation previously undertaken in isolated pits of the region is now connected and consolidated to form a lower and wider profile for the Grensmaas River. "Room for the river" suggests slowly reverting to a prior, wider profile in accordance with preregulation status. The project is presented to the residents via renderings of a topographically articulated, gravel canyon landscape with islands and sculpted banks. The reality of the sediment regime, which will eventually settle in this stretch of the Maas, will be closer to the horizontal extents of mud flats. After the gravel has

been excavated, shipped, and sold to the next construction project, the Grens-maas Project may end merely as a loss of fertile agricultural land, with the excavated gravel volume in the river profile slowly being replaced by finer fractions of river sediment. It is questionable, how much of an ecological gain this landscape of eutrophic alluvial deposit will inevitably turn out to be. The second objective of flood protection must be critically questioned as well, since the anticipated gain in volume intended to store river floodwaters may soon be filled again with an accretion of the rivers sediment.

On the other hand the Netherlands landscape has always been the utilitarian expression of a merchant society, the nature/culture division was abandoned a long time ago.

THE DUMP AS THE NEW SUBLIME

Nicole Theresa Raab's paper entitled, "The Wilderness Downtown," focuses on the indeterminate nature of Johannesburg's mine dumps. The presentation is based on her thesis project and examines the residual sites of the post gold-mining landscape within the city of Johannesburg.

"Because of the way in which the city developed, the mine dumps eventually segregated the population geographically and according to racist criteria and levels of income during the apartheid years, with those at the lower end having to suffer their toxicity, radioactivity, and hazardous dust."

These non-conceived landscapes escape any definition or known classification of urban open or green space.

"Being landscapes of invisibility and erasure, the mining lands are difficult to deal with due to their strangeness and failure to resemble anything familiar in the cityscape. They are spaces that are at once artificial/man-made and natural/wild."

AUGMENTED WILDERNESS

"Their specific cultural background makes it complicated to understand them as objects of the natural realm. Yet, in turn, their nature-like characteristics of uncertainty, unpredictability, and purposelessness are disturbing when trying to grasp them as cultural entities."

The gold mine dumping grounds provide a compelling example for an emerging anthropogenic wilderness. This is where the dichotomy of value extraction and environmental justice regarding residual contamination is most pronounced. Wilderness today is no longer the classical model of something void of culture, or the image of a pristine, untouched, or undiscovered nature. It is much more a circumstance of inconsumerability and a quality that defies conventional categories. It needs to be rediscovered and interpreted in order to be reintroduced into the realm of the civilized.

The phenomenon described here can be referenced by the terms "*stim*" and "*dross*" introduced earlier by Lars Lerup. The *dross* is the residue, the dump the place of

neglect. *Stim* is the place that aggregates attention, stewardship, and resources. Similar to the author Lerup, a new classification is offered in this paper that challenges conventional categories of nature and culture.

Interestingly, in this study, the meaning of the condition of *dross* is beginning to turn towards an unexpected *stim*.

The author provides a very provoking shift in the way we see neglected and marginalized mining dumps, as they are being rediscovered as urban wildernesses. Their resistance to appropriation and commodification allows for a new imagination and interoperation of these sites.

"A SUBLIME ANTHROPOCENE?"

Susanne Hauser has described similar sites of post-industrial heritage as the "new sublime." Vast, remote nature was once considered "sublime." One example of this is the Swiss Alps, which could not be commodified because they were originally based on a strict nature/culture divide. The inability to define them in cultural terms only increased their awe-inspiring presence. Hauser argues that the same incapacity to comprehend landscapes today lays in contamination and abandonment, the extent of which leaves us equally daunted, as does our incapacity to intervene. The dumpsites of our culture have become the new sublime. Politically very different, but related in the general phenomenon of extraction and abandonment as being the prerequisites for a new cycle of discovery, is the post-industrial region of the Ruhr. The process of rediscovery begins slowly, but is able at some point to generate more interest than the ubiquitous, and mostly mediocre, urban condition surrounding it. This is most apparent with the Zeche Zollverein or Landschaftspark Duisburg-Nord projects as the new island of *stim* surrounded by fairly generic neighborhoods. The default condition of *stim* and *dross* has been turned on its head. This of course must be understood as a long-term result of reinterpretation, selective decontamination, and careful management and reprogramming in phases. These islands of augmented wilderness provide new sparks that ignite new attention and engagement not only for themselves, but for adjacent neighborhoods.

"It is because the mine dumps defy the dichotomy of culture/nature, that they provide opportunity for dealing with issues such as the domination of nature, nature's renitence and its dangers, as well as its appropriation and culturalization in the modern age."

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TRAUMATIC URBAN LANDSCAPE

JÖRG REKITTKE
*National University of Singapore,
School of Design and Environment,
Department of Architecture, Singapore*
rekittke@nus.edu.sg

Jörg Rekittke is associate professor
at the Department of Architecture,
School of Design and Environment,
National University of Singapore. He
serves as director of the NUS Master of
Landscape Architecture program. He
holds a doctorate from RWTH Aachen
University, and has been assistant pro-
fessor at RWTH Aachen University at
the Department of Landscape Design
as well as at the Department of Urban
Design and Regional Planning. He con-
tinued his academic work at the Chair
of Landscape Architecture, University
of Wageningen, the Netherlands. His
current research is related to landsca-
pe architecture in the mega-urban
context and the concept of Grassroots
GIS. He is affiliated professor in the
research module "Landscape Ecology"
of the Future Cities Laboratory,
Singapore-ETH Centre for Global
Environmental Sustainability.

CHRISTOPHE GIROT
*ETH Zurich, Institute of Landscape
Architecture, Switzerland*
girot@arch.ethz.ch

Girot is full professor at the Chair
of Landscape Architecture at the
Department of Architecture of the
Swiss Federal Institute of Technology
in Zurich (ETH). His research addresses
three fundamental themes: new topo-
logical methods in landscape design,
new media in landscape analysis and
perception, recent history and theory
of landscape design. Emphasis is
placed on the fields of action of cont-
emporary large-scale urban landscape
with a particular attention given to
sustainable design. He is currently
based in the Future Cities Laboratory
in Singapore. His practice Atelier
Girot based in Zurich specializes in
large-scale landscape architectural
projects with engineers from the NEAT
and from Rhone 3. He is head of the
research module "Landscape Ecology"
of the Future Cities Laboratory,
Singapore-ETH Centre for Global
Environmental Sustainability.

design research / topological study / mega urban landscape /
urban flooding typologies / hydrological research

URBAN TRAUMA

A trauma is qualified by a physiological injury or shock
caused by an external source. It denotes an event or situation
that causes distress and disruption, with lasting damage to
the psyche, potentially leading to neurosis. As landscape
architects, we diagnose the site of operations we are involved
with as a *traumatic* urban landscape. Concentrating on an
urbanized landscape in south-central Jakarta, Indonesia, our
team conducts anticipatory design research work. Jakarta, a
metropolis of about twenty-eight million people, is the right
place to test and if need be overturn stereotyped approaches
and reflexes. Traumatized anew, by extreme flooding in 2013,
the city constitutes the ultimate challenge for contemporary
landscape architecture. Our team works in Kampung Melayu
and Kampung Bukit Duri along the Ciliwung River, one of
thirteen rivers flowing through the Jakarta delta (Girot and
Rekittke 2011). The Ciliwung River is impetuous and lives out
its seasonal natural temperament, running down to a trickle
in the dry season or erupting into a torrential outburst in the
wet season. Indonesian people are stalwart, but the floods in
2007 and 2013 stopped everybody cold laughing [**FIGURE 5**].

FIGURE 1 The local mosque plays a key role in the daily community life. Using this well-respected core element of public life to bring back respect to the river, appears to be a promising approach. (Graphics: DRS 01, 2012)

Our group formed to find out if the natural system represented by the Ciliwung River, can contribute to urban melioration in Jakarta (Rekittke and Girot 2012). In this paper we discuss three consecutive collaborative Design Research Studios (DRS) that were conducted between January 2012 and May 2013 with two cohorts of Master of Landscape Architecture students from the National University of Singapore. The work has been processed in the frame of the Future Cities Laboratory (FCL) research module "Landscape Ecology," under the umbrella of the Singapore-ETH Centre for Global Environmental Sustainability (SEC). Kampung Melayu and Kampung Bukit Duri are informal urban settlements centrally located in Jakarta.

LOCAL MINDSET

Following the intriguing mindset of the local people, our project does not see flooding as a problem, but as a potential motor for adaptation and change. Not so long ago rivers were an integral part of Jakartan urban reality, they were respected and considered sacred. Rivers and floods are natural and must be accepted as such, they are a significant part of the urban landscape. People here cope with cataclysmic floods in an admirable way, but completely repress it thereafter, as if nature's reminder had not struck. Our work will explore how the city and the river landscape might be

better designed for natural occurrences and fluctuations in the long run. And this for a simple fact: natural floods will happen again and again in years to come.

The vitality of the "big village" (Leaf 1992) of Jakarta is jarred by the unpredictability of the urban rivers and groundwater dynamics. Many of the river edge details analyzed in 2011 and 2012 have been either washed away or modified by the 2013 floods. The river dynamic is taken into consideration as part of our methodology and design approach. We strive for maximum design realism and site rootedness. We intend to train a new breed of shock resistant, post-traumatic urban landscape designers. Jakarta's environmental conditions are simply beyond description and terrifying. Scientific spot tests confirm that 98 percent of respondents in Bukit Duri admitted to throw all their waste into the Ciliwung River (Texier 2008). This is just a drop in the ocean; Jakarta distinguishes itself by lack of a citywide sewage system and throws hundreds of tons of untreated raw waste and garbage in its rivers each day (Cochrane et al. 2009).

DATA-POOR LANDING

After *landing* (Girot 1999), countless problems resurfaced during intensive fieldwork, like the lack of proper sanitation, clean water, safe river crossings, et cetera. The complexity of the site and the ampleness of deficiencies are a genuine
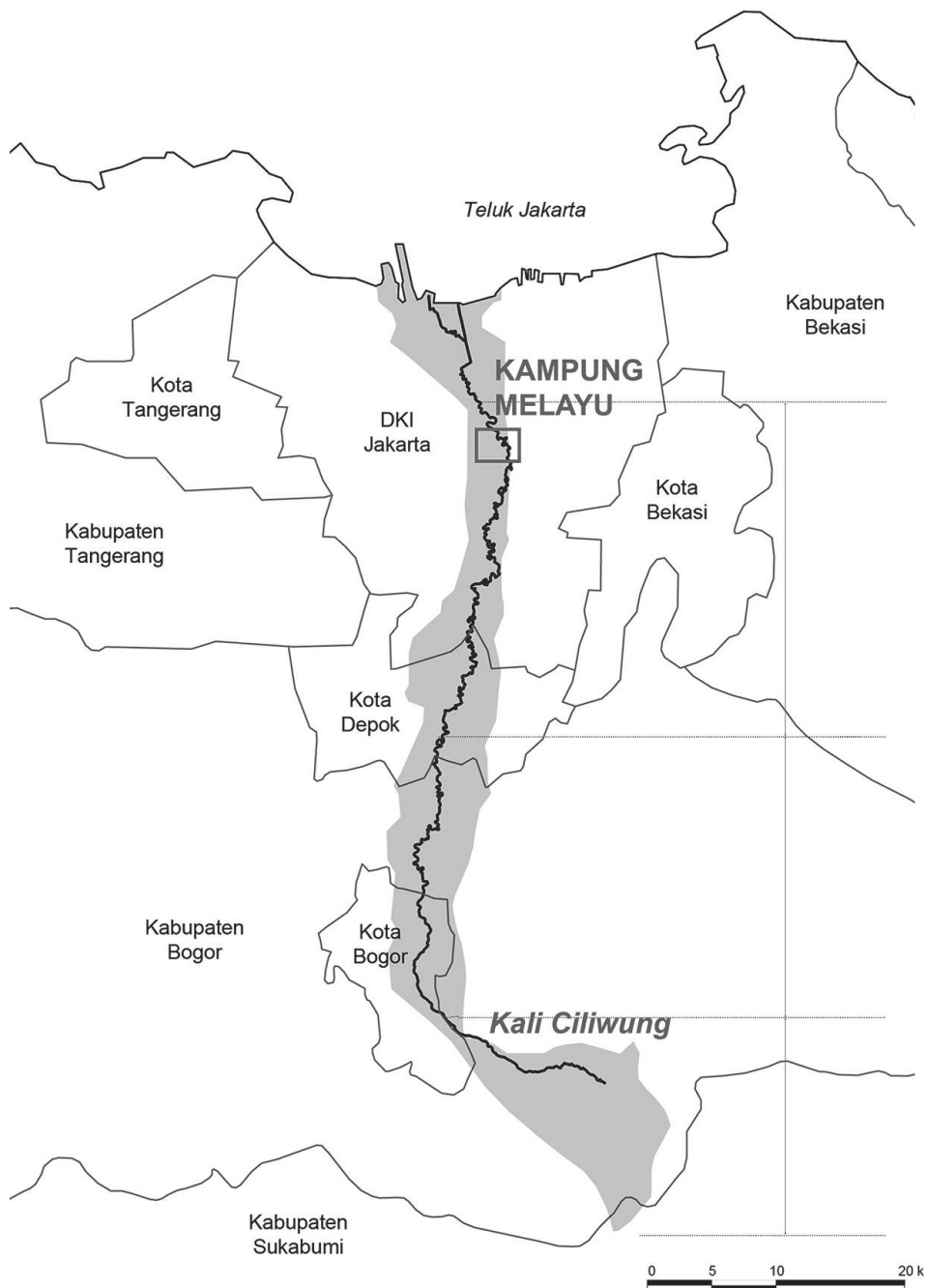
FIGURE 2 Both the varying water level of the Ciliwung River and potential
urban design interventions along its course are tied intrinsically to the topogra-
phy. Serial cross sections through the study area reveal this axiomatic relation.
(Graphics and Photos: DRS 01, 2012)

Permata 2
Gado Gado

Kampung Melayu
Castle

Bukit Duri Permai
White House

Bukit Duri Utara
Depot

Tanjakan 3
Steps

Tanjakan
Market

Kampung Pulo
Open Court

Bukit Duri
School Garden

Anwar
Bukit Duri to Hospital

Kampung Melayu Kechil 2
KMK2
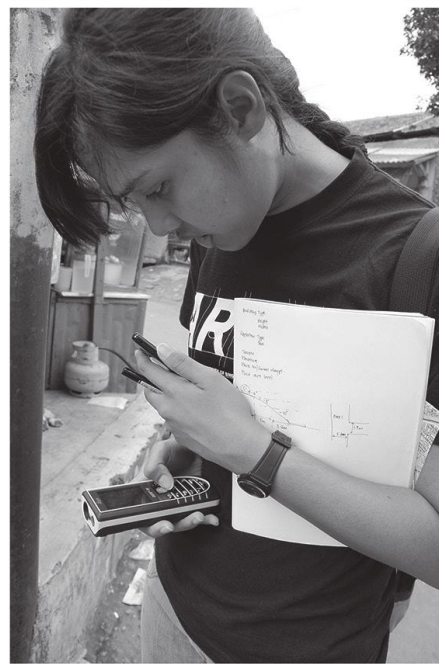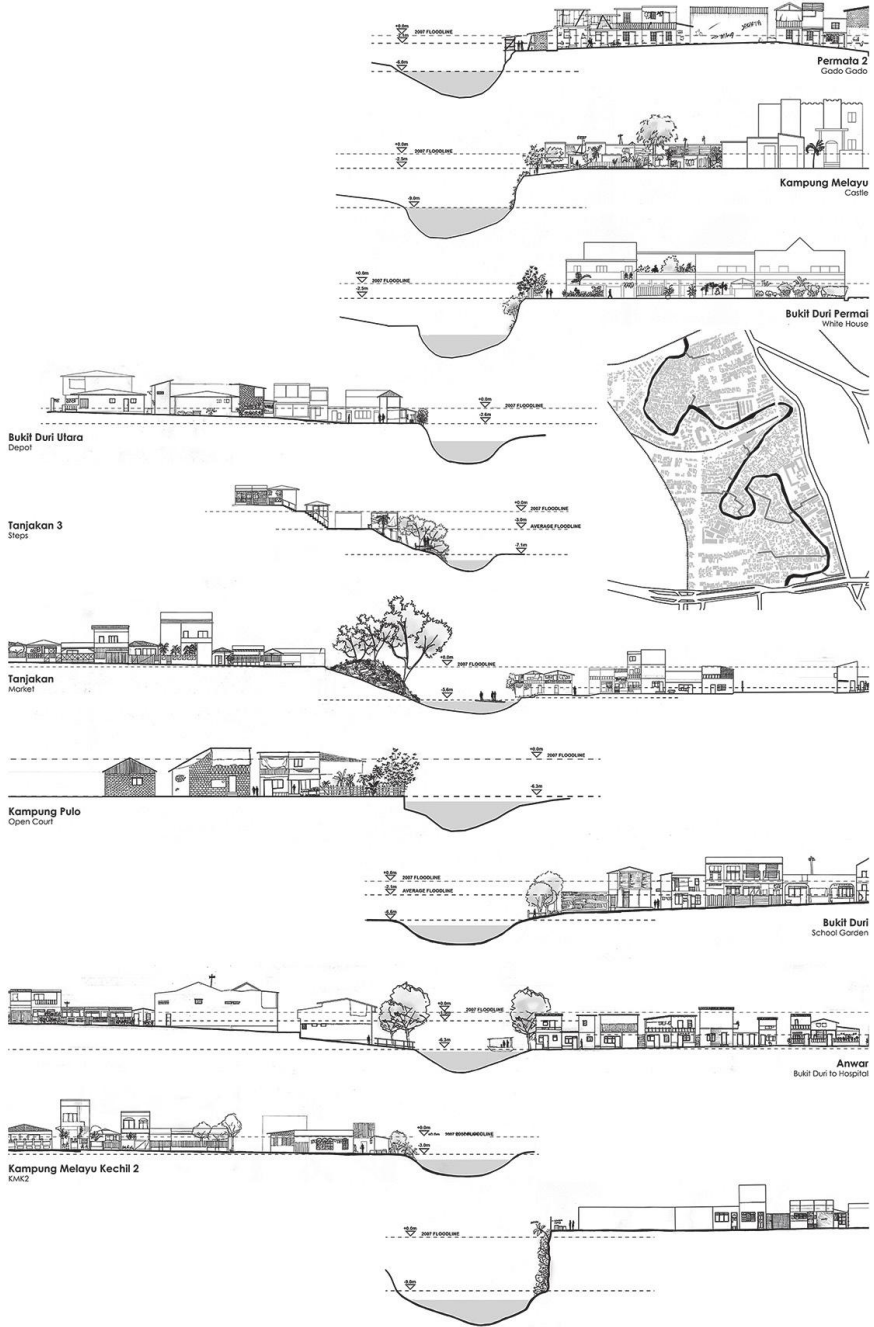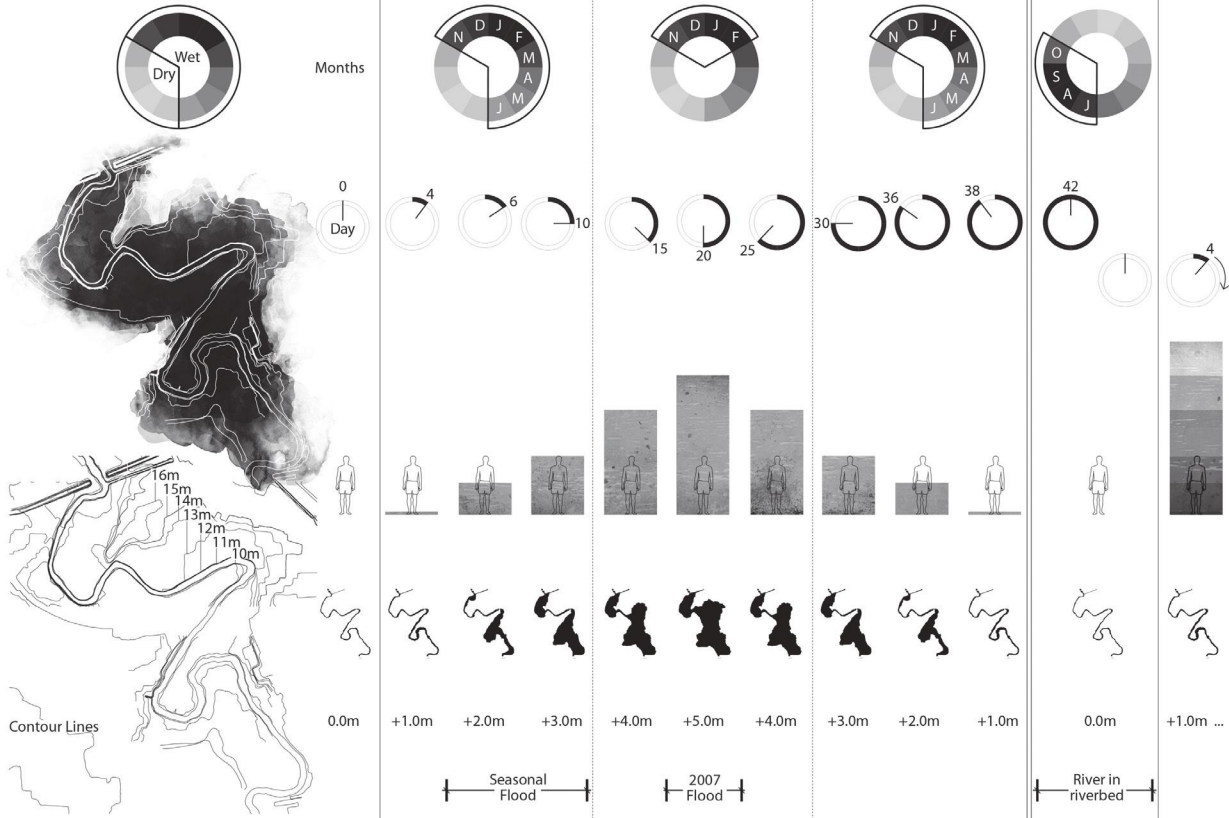
FIGURE 3 The changing water volume over time and across the terrain is divided into one-meter increments corresponding to the contour lines of the terrain (+0 = 10m contour line). Only the dry-season river remains within the central river channel. Seasonal floods range from +2m to +3m. Extreme floods reached +5m yet. (Graphics: DRS 02, 2012)
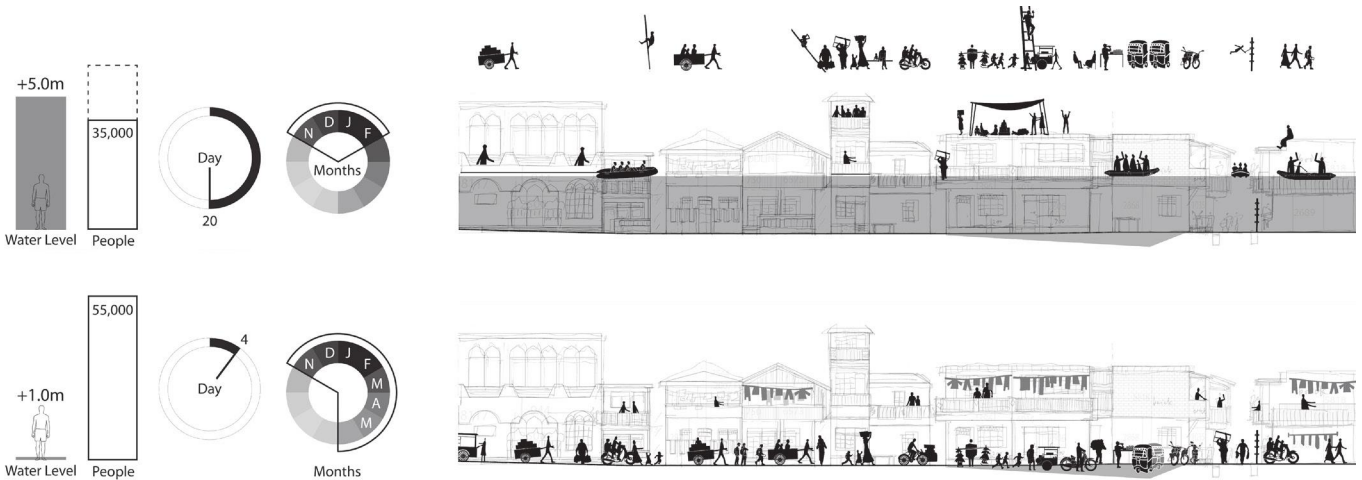
FIGURE 4 At an increase of +1m the residents calmly shift belongings to upper storeys. +5m corresponds with the 2007 cataclysmic flood. The water depth becomes more than twice a person's height. Still, most of the people hold out. (Graphics: DRS 02, 2012)

challenge for students trying to promote a positive image of nature in the city. The studios operate in a data-poor environment. Large parts of our working area are situated under vegetation and urban canopy, where remote sensing technology proves to be almost blind. In such a context, no one hands out any expedient data, suitable for a copy paste transfer to computers (Rekittke et al. 2013). In the field, basic equipment was used to collect the necessary data, including handheld GPS devices, laser-based rangefinders, all sorts of digital cameras—and of course pen and paper (Rekittke et al. 2012). Precise sections of terrain and river played a central role. Analyzing them brought the relationship between the river, topography, and housing types to light [FIGURE 2].

The first studio proposed a series of public interventions along the river that would have an impact on ingrained structures and habits—reconnecting the residents to the river both physically and psychologically, motivating them to relinquish their status as "river abusers." For instance, the purposeful shifting of central community functions towards the river edge—considering the flood levels—might generate such effect [FIGURE 1].

SECOND ROUND

In DRS 02, entitled "City in the River," we tackled Jakarta no longer as newcomers, but as returnees. The DRS 01 vanguard had prepared the ground for deeper research and design action. Principle is to build on what we have accurately, allowing the development of new design methodology and advanced working tools. We focused on the detection, detailed documentation, and interpretation of the different river levels in the urban realm. So far we just obtained a rough idea of those lines and their consequences on life in the Kampung. The river constitutes a multi-faceted, organic line through the city tissue. Changing river levels constitute a contour line-like representation of a virtual riverbed. The ground framed by rivers and floodlines is one of the crucial arenas for the future landscape development of the city. Jakarta is a city in the river, respectively in thirteen rivers.

Our project gets around regarding the flood as a problem, by understanding that it is a stressful but natural and tolerated part of the landscape. Its pulsating horizontal and vertical fluctuation is what we refer to as the "Rhythm of the River" [FIGURE 3].

Many of the houses in Kampung Melayu and Kampung Bukit Duri become entirely submerged during extreme wet season flooding; a large number remains partly flooded at every flood event. All harm and loss caused on site doesn't lead to the migration of the population—they either stay where they are or return again and again. We came across family estates on the banks of the Ciliwung, which have been defended and developed for generations now. These people live literally "in" the river, which became a tolerated part of their lives [FIGURE 4]. We regard such a die-hard dwelling concept as an interesting urban living model in the mega-urban context. A model, which might not be particularly desirable, but that is adamantly defended by millions of people in the Asian megacities. Is this an axiomatic part of a "Future City"? Can we find design strategies for the improvement of such outrageous city realities? These were core questions, which came up in DRS 02 and led us into the third round of our quest.

THIRD TIME LUCKY

The success of the three successive Design Research Studios of the FCL in Jakarta lies in the profound understanding of a vicarious dependency on the unstable parameters and changing temperament of the river landscape. Third time lucky—we had to go through three studios to shake off the feeling of not yet having found the right way to grasp a convincing design strategy. We realized that the river should not be changed significantly but that the urban layer adjacent to the banks should be influenced by landscape change. Finally the central question, "What is the first key aspect the designer has to tackle when trying to improve the situation of a place like our Kampung?" lead to a breakthrough in our thinking (Rekittke 2013). Likewise, the January monsoon contributed to the collective enlightenment. Jakarta was hit

FIGURE 5 This unintended "urban landscape profile" in Kampung Melayu, Jakarta, reveals the implicit force of the tropical Ciliwung River. (Photo: Wong Ruen Qing, 2013)

by another cataclysmic flood, our students didn't hesitate to book flight tickets—and head right into the flood. That was the moment when they grasped the landscape project in all its physical dimensions.

The Jakarta experience deeply persuaded us that a combined understanding of topography and fluctuating river levels serve as axiomatic indicators for any design intervention. Every newly added or altered design element has to be water-resistant, waterproof, or positioned above the known maximum level of the river. An endless number of detailed interventions are possible, but none make sense unless they meet the axiomatic river parameters. The future city has to be constructed around the river, based on the knowledge about its history and rhythms. Rivers are dominant landscape elements in large parts of Jakarta and their levels are "horizontally equalizing" in all affected urban areas. Everything that is affected by the river water is located near to the ground, close to the streetscape and other public space. The space of the "City in the River," needs particular advertence by the designer, to comply with the genuine "theater of operations" of landscape architects. From now on we equate the changing water levels of urban rivers with what we refer to as the "Horizontal Urban Trim Line" (Rekittke 2013). The line enforces a thorough design reconsideration of everything that stands below it, because that space is

regularly affected by temporary "river occurrences." Seen from an urban design perspective, everything above the trim line is less essential, widely substitutable, and rather insignificant (ibid.). To make this correlation visible to the population, students implemented a 1:1 scale installation in the Kampung [**FIGURE 6**]. The local residents contributed to the installation and enjoyed it. The urban ecology of the contemporary city must be collectively understood in order to find flexible strategies of adaptation instead of relying upon costly Byzantine engineering solutions.

ACKNOWLEDGEMENTS

FIGURE 6 Finding and marking of the Horizontal Urban Trim Line by DRS 03 students in Jakarta, 2013. Everything above the trim line is less essential, widely substitutable, and rather insignificant. (Graphic: Rekittke)

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PARADOXCITY VENICE

JORG SIEWEKE
University of Virginia, Landscape Architecture, ParadoXcity, USA
sieweke@virginia.edu

Jorg Sieweke is assistant professor in landscape architecture at University of Virginia and visiting professor at RWTH Aachen. He previously taught and practiced in Berlin, Stuttgart, and Dresden, Germany, where he is a licensed urban designer and landscape architect. Sieweke directs "ParadoXcity" a design research initiative that critically explores paradigms of modernity to identify design opportunities for "value added engineering." Recent ParadoXcity studios focused on civic infrastructure and urban metabolism in Venice, New Orleans, and Baltimore. He conceived and conducted the 2013 International Woltz Symposium titled "QuasiObjects/WorldObjects/Hyper-Objects: New Classifications for the Urban Metabolism." He was awarded the CELA 2013 Studio Teaching Award.

infrastructure / delta cties / nature paradigm /
modernity / Venice / New Orleans

This paper argues to reevaluate learning from Venice—not for its formal appearance, but for its performance—more precisely, how well the legacy of its cultural practices suits its environment.

Given the staggering rates of change all around us, how can we learn from Venice as an eloquent avant-garde model of accommodating change—and how can we learn from the drama of apparently losing this capacity somewhere along its path of modernization?

Venice has 60,000 tourists daily, which exceeds the number of its remaining residents. What are they looking at? Besides admiration for the cultural heritage of artifact, is there a collective shudder of facing the apparently inevitable latent deluge? At first glance, the city presents itself as a unique accumulation of artifacts of renaissance art, architecture, and urban form. Venice material manifestations of wealth represent one of the first successful global merchant cities—the palace facades along the canal signifying the pride of the thriving *Serenissima.*

Early settlers choose the least likely territory to lay foundations for a city to eventually rise to the most successful
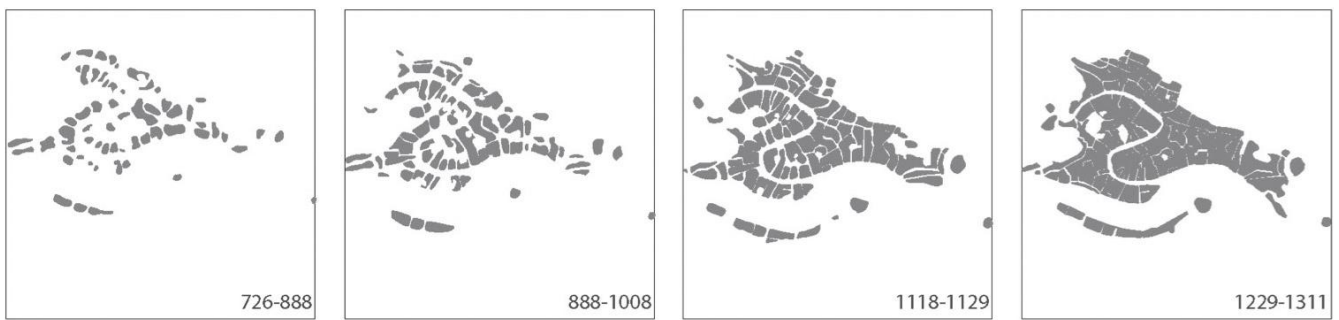
LAND ACCRETION, 726 CE - PRESENT

Venice developed from a group of sand and silt islands into today's 125 city through a combination of natural process and human intervention. The Canale Grande, for instance, initially developed naturally as a tidal channel. Through dredging, the construction of canal walls, and riverine traffic, however, the canal's form was clarified through human intervention.
source: Franzoni, *Venise au fil du temps*
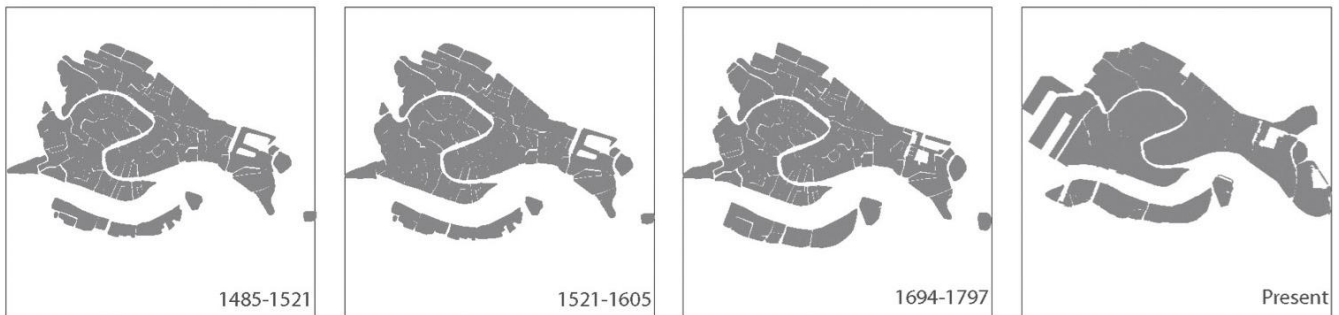
FIGURE 1 Map mudflats

empires of its time. Venice was originally founded as a retreat from terra firma out of military inferiority. How did the Venetians not only manage to sustain, but thrive in this environment?

Different from this conventional exclusive morphological reading, this paper argues for the lagoon city to be understood and appreciated as a model for reconciling the urban metabolism with the metabolic potential of the surrounding landscape dynamics. The lagoon—an ephemeral landscape between land and sea, must support a city challenged by an inherently instable and constantly transforming territory.

On the far other end, Venice appears as a stagnant condition today, how did the city lose its capacity to adapt eloquently to the dynamics of the site?

One may argue that the Serenissima really should be appreciated as the art of *preserving the flow* or in other words *homeorhesis* (Naveh 1979): an inclusive set of cultural practices, regulations, and rituals that understood the direction and potential of the lagoon's intrinsic dynamics. The entire management was a deliberate and comprehensive ongoing adjustment and adaptation of co-evolving with the natural processes that were identified in the lagoon between streams and tides.

Originally conceived as a biological model, the *necessary path* in other words "chreod" (Waddington 1957) represents

one out of many bifurcating paths of possible destiny. In this topological model, the path is being determined by the morphogenetic field condition of the surface that holds it. Analogue to a shifting deltaic fan, the land is being incrementally raised in the path of the river due to sedimentation, eventfully giving way to the next emerging distributary breaking through to a lower lying diverting path. This next necessary path is an outcome of the conditions determined by the prior path—forming a cyclic causal relationship of flows and morphology. If these patterns are sufficiently understood, they may be steered by a careful alteration of the morphogenetic surface while preserving their flows. Different form the historic *chreod* model that conceived one path of gene developing; for a deltaic landscape we would be thinking of multiple iterations of determining new path over the same surface.

It may be argued that the end of the Serenissima marks the loss of this sophistication of sustaining evolutionary stability (homeorhesis). With the rise of the modernist principle of imposing control and order, the calibration of its morphological field condition was sacrificed to a mandate of acceleration, centralization. It required a different paradigm of stationary stability: *homeostasis*—defending the city against outside changes.

The present state of static decay might be the opposite of what made Venice initially succeed. Venice emerged incrementally
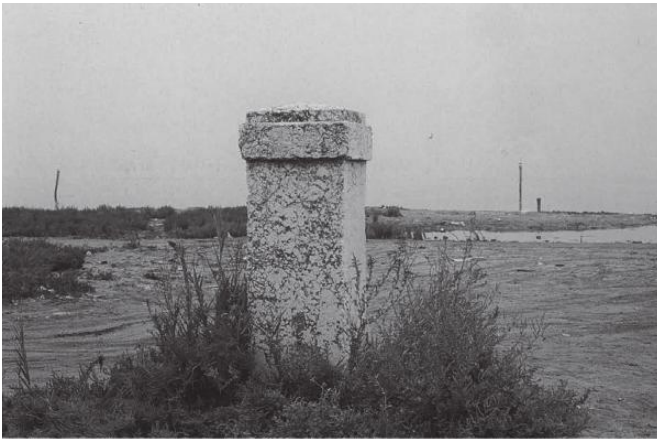
FIGURE 2 Cippi

out of consolidated mud flats along a tidal channel known at the Canale Grande today. Long before any palace, today's island literally emerged from swampy ground of initially, salt-grass vegetation colonizing mudflats. Their roots forming the basis for any land in the lagoon—until today [**FIGURE 1**].

100 CIPPI

These competing concepts of stationary versus evolutionary stability can be traced back in the management of the entire lagoon setting as deliberate decisions sustaining this ephemeral environment. In 1792, the *Magistrato alle Acque di Venezia* laid down one hundred *cippi* marker stones to demarcate the boundary between land and sea (Armani 1991). As any structure built to last in the swampy ground of the lagoon, the markers made from istrian limestone are set on a foundation of submerged wooden friction pilings. The line connecting a hundred cippi demarcated the boundary between land, that is, *terra firma* and sea. Most of them can still be found today [**FIGURE 2**].

In all other places this may not be a noteworthy achievement —except here, three rivers were changed in their course to divert the sediment and fresh water away from the settlements. The relentless deposit of sediment of the Veneto rivers would have otherwise silted up the lagoon and created a series of delta formations similar to the Po River Delta just south of the lagoon. The Venetians understood such geomorphological dynamics, and took unprecedented actions to redirect the Veneto rivers. Averting the legacy of the Roman port of Ostia and other ports that were abandoned due to this siltation.

The central Roman settlement in the lagoon was not located at the Canale Grande but on a different island called Certosa, before the siltation of River Sile threatened its existence as well. Ironically, the Romans capable of dominating the entire continent could not keep this small island afloat. Certosa was abandoned, leaving only a Roman church tower as a trace of that period. Much later with renaissance efforts demarcating the boundary between land and sea, the River Sile was rerouted north.

The diverted rivers Sile, Brenta, and Piave are redirected around the lagoon perimeter until today, and consequently run higher than the drained and therefore compacted subsiding farmland adjacent to the rivers. The necessary path of redirecting the flows was critical in the Renaissance period in order to keep the deltas from compromising navigation, but would have required revision about a century ago. Today the contrary long-term effects are threatening Venice: the lagoon desperately needs sediment. It misses the recharge and is eroding due to industrial clam harvesting, increased motorboat turbidity, and severe dredging to accommodate increasingly large cruise ships. The obscured deltas intermittently stabilized into a lagoon condition has been silently transforming into a bay in the past century. Current cartography indicates that the management of the rivers is essentially controlling the relentless deposit of sediment. The multiple historic paths of incrementally diverting the Brenta show in the current soil survey maps as traceable sedimentation paths. On the flip side, the current bathymetry mapping of the lagoon indicates the lagoon's starvation of sediment. Every tidal cycle flushes the suspended sediment out in the Adriatic Sea without being replenished by the rivers sediment load. The early Renaissance ingenuity of understanding evolutionary stability while preserving the flow appears to be lost and, it seems, they are the root of the problem of stationary stability today [**FIGURE 3**].
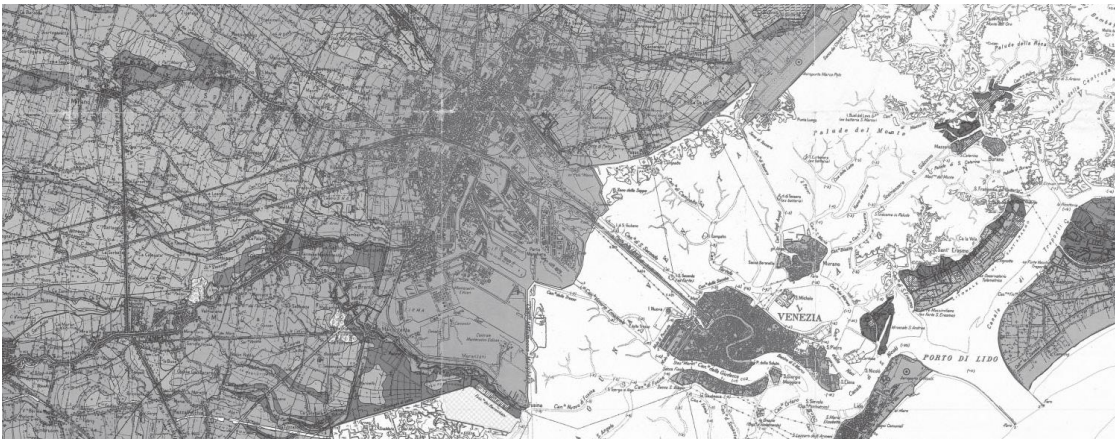
FIGURE 3 soil map

IS A LAGOON A CONSTRUCTED WETLAND?

Considering Venice's urban metabolism, the city still performs as a single open system that relies on being flushed by the tide twice a day. Venetians would never consider walking through *"acqua alta"* barefoot, even if the temperature permits, because they know the city's sewage is released into the lagoon without prior treatment—it is released into the lagoon precisely *for* treatment. Given the interest in gray water treatment and living machine technologies, it is only fair to assume that the man-made lagoon represents a large "constructed wetland" constructed wetland that must be regularly flushed by the tide.

One of the key concerns of the ongoing implementation of the M.O.S.E. (Experimental Electromechanical Module) barrier project, which resembles large, operable, vertically hinged floodgates, is the impact on the lagoon ecosystem. A threshold of one hundred or more days/year of closure may be compromising the water quality to become stagnant and foul. Again, the lagoon and with it the city depends on preserving the flow.

METABOLIC URBAN MORPHOLOGY

Former cultural practices and elaborated techniques, and their underlying mindsets described above, may still teach us something about getting a better grip of "ecosystem services" and "green infrastructure," today.

The Venetian *fish pens* tap into the inert flows of both the tide and the river's freshwater and nutrients. They represent elaborated cultural technique of tapping into the appreciated natural flows that are productive without contradicting or compromising the integrity of the lagoon's own metabolism. Similarly, the Venice cisterns resemble an emblematic resourceful utility and a social space at the same time. The

campi, the typical Venetian public squares in the densely urbanized matrix, mark the central unit of each neighborhood. Not only do the *calle* pathways of residential streets convene here, but the entire stormwater run off from adjacent roofs is also collected under their surfaces. It is carried through a carefully sculpted micro-topography that guides the water to the inlets. Here it would reach the underground volume of a sand filter that is sealed to the side and bottom from the brackish lagoon waters. The surface of the *campi* not only supports the infrastructure for collecting the water, but also for redistributing it through a wellhead in the center of it. The beautifully designed and ornamental wellheads can be recognized as focal objects on every campo.

The volume of the underground sand filter storage reflected the size of the neighborhood being served by it since it used to be the only source of drinking, historically. Of course the wealthy merchant families had their own private version of cisterns under their palace's courtyards. These layers of performative significance can only be appreciated with the knowledge of the entire subterrain infrastructure and its hidden functions.

After the cisterns and wells have been abandoned—drinking water supply was provided in an accelerated and centralized fashion by tapping into the aquifer below the lagoon —which made Venice sink an irreversible twenty centimeters below sea level in the nineteen-seventies.

RITUALS

The demystification and secularization of nature that opened the path to its exploitation as a resource in modernity was compensated by a new relationship represented in an elaborated series of quasi-religious rituals. These civic rituals represent a remarkable resourceful attitude to nature in Venice

and playfully signify a highly regulated society. The Doge would celebrate the "marriage with the sea" symbolizing mutual dependency between society and the sea. A highly regulated society becomes apparent in the quarantining of each ship entering the lagoon, or in the severe punishment for anyone who pollutes the water.

CULTURE AND TECHNOLOGY

The rereading of these particular cultural practices helps us appreciate how a number of highly adapted and eloquent techniques were already well established in the Renaissance period. In our postmodern urban condition we are challenged to reinterpret these found techniques and contrast them against a modernist progression, which has cut many such close ties with its immediate environment. There is now the possibility of merging the premodern site sensibility with today's technologies of monitoring and intelligent systems networking. This also includes a critical view of other practices during the Serenissima that turned out to be rather unsustainable: such as the deforestation of virtually the entire Veneto in order to supply the Arsenale shipyards with wood to build ships.
Consequently, the discovery of the significance of these techniques is not directing us back to a romanticized better past —but to move forward within a mode of "reflexive modernization" (Beck 1993).
To become Venetian again suggests reconciling the urban infrastructure with the deltaic metabolism, which would then be co-producing as integral part of the urban metabolism — consequently resulting in urban form—to be admired as *serene* at last.

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NATURE BY DESIGN

RUDI VAN ETTEGER
Wageningen University, Landscape Architecture, the Netherlands
rudi.vanetteger@wur.nl

Rudi van Etteger (1966) is a landscape architect (MSc) and philosopher (MA). He teaches landscape architecture in studios and provides a lecture series on theory and aesthetics at Wageningen University. He is currently finishing a PhD thesis on the aesthetic evaluation of designed landscapes.

nature / nature development / design

In this paper I describe and reflect on the design for the Breemwaard. The Breemwaard is a part of the floodplain of the River Rhine in the Netherlands, near the city of Zaltbommel. The Breemwaard was transformed by a large-scale design project in 1998. Up to that moment the area was mainly used for agriculture as grassland. The area was redesigned for the extraction of sand and clay, and for an end-function as a natural floodplain. The development of the Breemwaard allows for reflections on the nuances in assigning natural values to an area. Whether natural value is defined by the presence of rare natural species, by natural processes running their course without human interference, or perhaps by an experience of naturalness for visitors, in this case makes a difference in the evaluation of the natural value of the area.

The Breemwaard in 1970 was an area mainly used as summer pasture for grazing cattle, which would flood every winter. Other uses were the limited extraction of clay for producing bricks and the production of willow coppice for branches. Originally the grazing was done extensively, but increased land pressure meant that even these summer pastures were ever more intensively used. In 1990, this area had turned into

a green desert of single-species grassland, with a few remnants of willow forest and some pools that were the remains of clay extraction. In 1995 and 1996, the Rhine reached a very high level. In some places the winter dikes were at the point of collapsing and large parts of the province of Gelderland were evacuated as a precaution. After these near-floodings the Dutch government decided to raise dikes and create more space for the river between the dikes. Sand and clay were extracted from the Breemwaard area to improve the adjacent dike and increase the potential volume of the flood bed between the levees. The end goal of the plan was for the Breemwaard to be a nature area that would also function as a buffer zone to stop the Rhine from flooding inhabited areas. The plan was developed by Bert Overkamp, ecologist, and Rudi van Etteger as landscape architect of the firm ARCADIS. After the project, the Breemwaard has become part of the ecological main structure (EHS). The EHS was started in the Netherlands in the nineteen-nineties, to counter the constant decline of natural areas in the Netherlands. To rebuild a network of larger and connected natural areas in the Netherlands former agricultural lands were turned into natural areas. The plan for the Breemwaard follows in the footsteps of the Plan Ooievaar, as developed by the landscape architects H + N + S in 1986 in which this design of natural floodplains was first proposed. But how can one design and how does one create and maintain "nature" and natural values?

In this case, the basic idea was first to spare and incorporate into the design those areas that already had natural values. These were the pools, the remnants of willow forest, and the dry parts of the grassland with specific floral values. Secondly, the agricultural lands were partly excavated for clay and turned into pools, and partly lowered so as to form wet grassland. The design was made in a way that long lines of sight were created between the dike and the river, across long bodies of water. Thus a contrast was created between the land, with the farms as protected by the dike on the one hand, and the wet area with the bodies of water, as signs of seasonal flooding on the other hand. The shapes and forms of the design were man-made in conception, but natural in form as they were similar in terms of shape to natural occurring side-streams of the river. The area would be managed by grazing cows and horses, as large wild herbivores are extinct in this area. Thus a balance would be reached between forests and grasslands. This balance was also essential in terms of the handling of the waterflow during floods. If the balance shifts towards the forest too much, the flow of water will be slowed down and flooding beyond the winter dike might occur.

Thus a new situation for natural development was designed and created. After all the digging was done, a natural vegetation developed. Due to a late start of grazing management, the area that was designed as grassland quickly developed into a softwood willow forest. Once the willows grew higher than the horses could reach and too many for the horses to consume, the horses' and cows' grazing could no longer stop the growth of the forest. A critical point had been crossed. From the point of view that natural values develop in the absence of human management, the area was a success. Natural succession into softwood forest is the potential natural vegetation on this soil under these circumstances. This process took place really rapidly due to the natural richness of soils and the river floodings as a natural conveyor belt for seeds and seedlings. The area, which had been a cultural landscape, was altered by design to become a "natural" landscape. The development of natural values seems to be confirmed by ecological research. Recent research by ecologists describes the area as valuable for different species (Peters and Kurstjens 2011).

However, certain rare species of plants and birds that were present in the start-up phase, have now disappeared again. The rare species of the open wet grassland, like the Avocet (*Recurvirostra avosetta*), Garganey (*Anas querquedula*), and the Little Ringed Plover (*Charadrius dubius*) have disappeared. The area has become more uniform in terms of vegetation structure and, thus, in the resulting animal species. Therefore, ecologists argue that the natural value could have been higher than at the time of their research. In the end of their report they advise removing part of the alluvial forest to restart the development of wet grassland and to start the process of management sooner this time and thus keep the forest in check. Thus the ecological research now shows that through lack of human management (sic!) the natural values are less than they were in the beginning. Though the

area has developed naturally, and perhaps more naturally than intended, it has lost the natural values which ecologists consider important.

The point of removal of the alluvial forest was also made by hydrologists. The hydrologists of the state office for water management also wanted the forest removed. They argued that the increased roughness of the forest, as compared to the grassland, would result in a slower flow of the river and, hence, in a higher risk for upstream flooding. Therefore the state forestry service as the manager of this area has come in and cut down most of the unplanned forest in 2012. Thus raising the natural value potentially again, but lowering the untouched natural characteristic of the area. In the end, ecological and experiential values are trumped in terms of importance by the function as flood bed that has necessitated management, which will turn the willow forest into grassland again. This discussion in term of contradicting ways of defining natural value of an area thus seem to lead nowhere.

There is, however, another way of looking at the natural value of the area. The area has gained enormously in what could be considered a natural experience for visitors. It starts with the fact that walking and hiking are free. This is in contrast with the former agricultural grasslands, but also in contrast with other natural areas in the Netherlands, where walking is mostly restricted to the paths. The fact that parts of the area can be flooded adds to the unpredictability of the visit. The existing paths in the area are for the larger part not maintained by mowing. That means that shrubs appear in the paths and that neighboring trees protrude their branches across the pathway. This necessitates alertness to the environment, which is also drawing attention to its spontaneous character. Instead of straight lines, the paths start to meander around these objects. The ground on which one walks is rough, sometimes slippery after rain. The presence of the cows and horses makes for animal tracks to develop, which can be followed and result in confrontation with the animals in the area. When walking along these paths, ducks and other water birds suddenly break their cover and startle the visitor. Dead fish and parts of half eaten birds are left and encountered by visitors. Decaying trees are left and become the home of mosses, ferns, and lichens. Caterpillars encase

the willows in nets of silk. Spiky, poisonous, and stinging plants are left by the grazers and confront the visitor. All of this creates an atmosphere of naturalness that is perhaps more important than rare species and unhindered natural processes for a nature area in the Netherlands.

The case thus illuminates the rift between scientific measurement and human experience of naturalness and thus sheds light on the differences between nature, natural processes, natural values as considered by experts, and values of nature for people. It reflects on nature as landscape (von Maltzahn 1994).

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THE WILDERNESS DOWNTOWN.
THE INDETERMINATE NATURE OF JOHANNESBURG'S MINE DUMPS

NICOLE THERESA RAAB
*University of Natural Resources and
Life Sciences (BOKU), Department of
Landscape, Spatial and Infrastructure
Sciences, Institute of Landscape
Architecture (ILA), Austria*
nicole.raab@boku.ac.at

Nicole Theresa Raab studied land-
scape architecture at BOKU Vienna,
Cornell University in Ithaca/New York,
and Wageningen University in the
Netherlands. She completed her grad-
uate studies, for which she received a
research grant from BOKU, in February
2012. She is pursuing her studies
further in a Master of Arts in Critical
Studies at the University of Fine Arts in
Vienna, which she will conclude with
a research and artistic work on "Land-
scapes fallen into Oblivion—Archaeo-
logies of a Repressed Past"—investi-
gating crime scenes of National Socia-
lism and the cultural reengineering of
commemoration with Freud's concept
of *L'Après Coups* (*Nachträglichkeit*). Cur-
rently she holds a research assistant
position at ILA and is part of the
editorial staff at *dérive—Magazine for
Urban Research.*

*Johannesburg / gold mining / mine dumps / urban transformation /
post-industrial landscape / urban wasteland*

DEPARTURE

*Wasteland. Derelict area. Residue. Badland. Void. Terrain
vague. No-man's-land. Brownfield. ...*
In the city of the twenty-first and late twentieth century,
there are many names for something so unwanted. Being in
transition from a manufacturing to a service-based econ-
omy, the legacy of the industrial age remains one of the
biggest challenges for landscape architects. The totalizing
notions of industrial capitalism and Fordism became the
fundamental idea of modernist urbanism. In the face of
de-industrialization from the nineteen-seventies onward,
the urban fabric underwent severe change. Its most ap-
parent symptoms are the dilapidated industrial structures
fallen into disuse and the environmental hazards they bring
about. They cause cities all over the world to be traversed
by interstitial spaces. Yet also the mechanistic, positivistic
perspectives of looking at these spaces ideationally and deal-
ing with them practically are inherited with them. These
spaces are often seen simply as leftovers of possibly thriving,
past and different values, and modes of production. Ap-
pearing to be outside of our conceptualization of utilizable
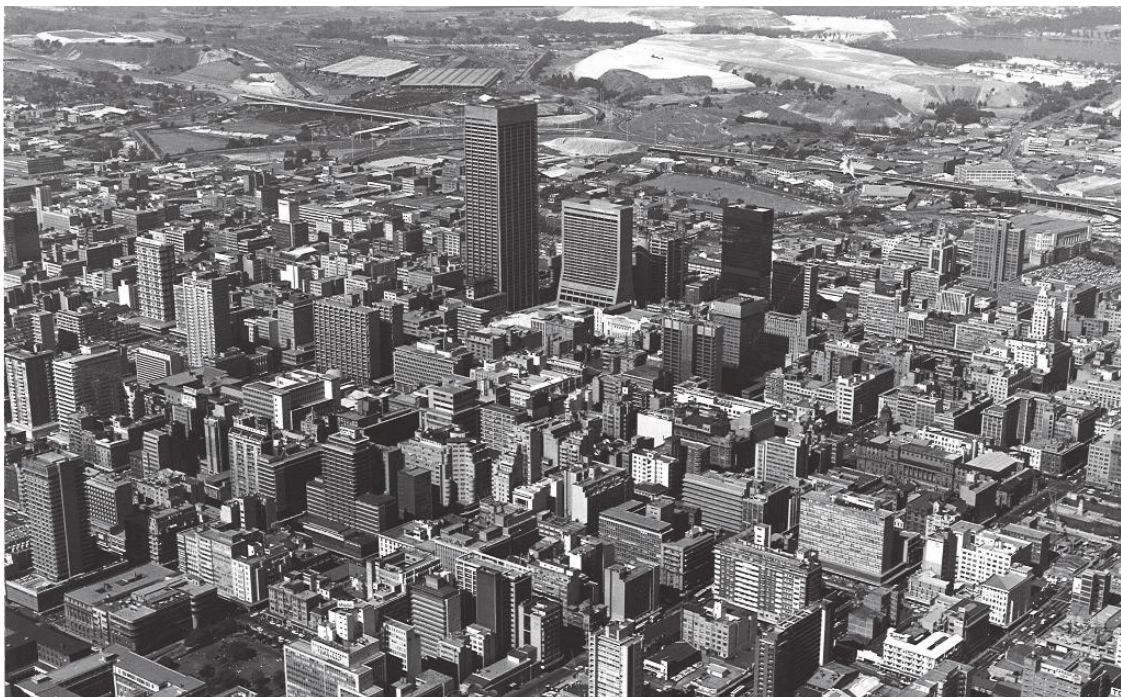
FIGURE 1 Joburg Central Business District in foreground, mine dumps of the southeast. Soweto in background. Highrise buildings are Carlton Centre and Carlton Hotel, and freeway is M2. The former is still the tallest building in Africa and was built by the mining company Anglo American. (Courtesy of Ray Eckstein, 1976)

space, two stances prevail: either seeking a technical fix or a moralistic demanding of a decrease in consumption. Within the post-industrial spaces the crude relationship we have toward a nature/culture dichotomy becomes apparent.

URBAN WASTELANDS

Since these spaces started to persist, their invalidation as urban wastelands is contested. From the nineteen-seventies onward, coinciding with progressing de-industrialization, a new gaze at the big city was recognizable. Ignasi de Solà-Morales (1995, 119) observed that the empty, abandoned spaces became the new fancy of the urban photographer. These places, he states, are internal to the city yet mentally exterior to the urban system. Because they are not inhabited by architecture, by the built volume, they constitute places of insecurity. They may be appropriated, but those activities are undefined and uncontrolled, they are the "negative of the city." A decade later, Gil Doron (2000, 2007) examined what is known as urban void or places of nothingness by directly looking at them. He states that the reason for authorities not being able to integrate them into concepts of space other than degraded and empty, lies in the problem of looking at them from afar. Spaces void of architecture often only become replenished with meaning through real estate speculation. In reality though, those

places lack neither activity nor order (Doron 2000, 247pp). When such spaces are finally turned, the discussion, Elizabeth K. Meyer (2007) argues, on the reuse of disturbed sites is focused on remediation techniques necessary before human use can be safe. Highlighting this particularity fails to show what these places mean to the communities that surround and use them (ibid., 60).

JOHANNESBURG

Johannesburg is probably the only example of an African metropolitan modernity (Mbembe 2004). In 1886, the year of its groundbreaking, Johannesburg was the first site on the African continent where capital, labor, and industry all came together. Here, the modernist "city as machine" not only manifested through modes of production, but also along the spatial ramifications of apartheid. It is still a city of extremes. While it is the economic powerhouse of the country and the continent's financial hub, landscapes of shacks sprawl around it. Urbanization is increasing, as is income inequality. Its citizens have to rely ever more on emerging informal systems and, after almost twenty years of democracy, the city still struggles with the challenges of inclusion.

Located at almost 1,800 meters above sea level on the Witwatersrand, Johannesburg is the only megacity in the world
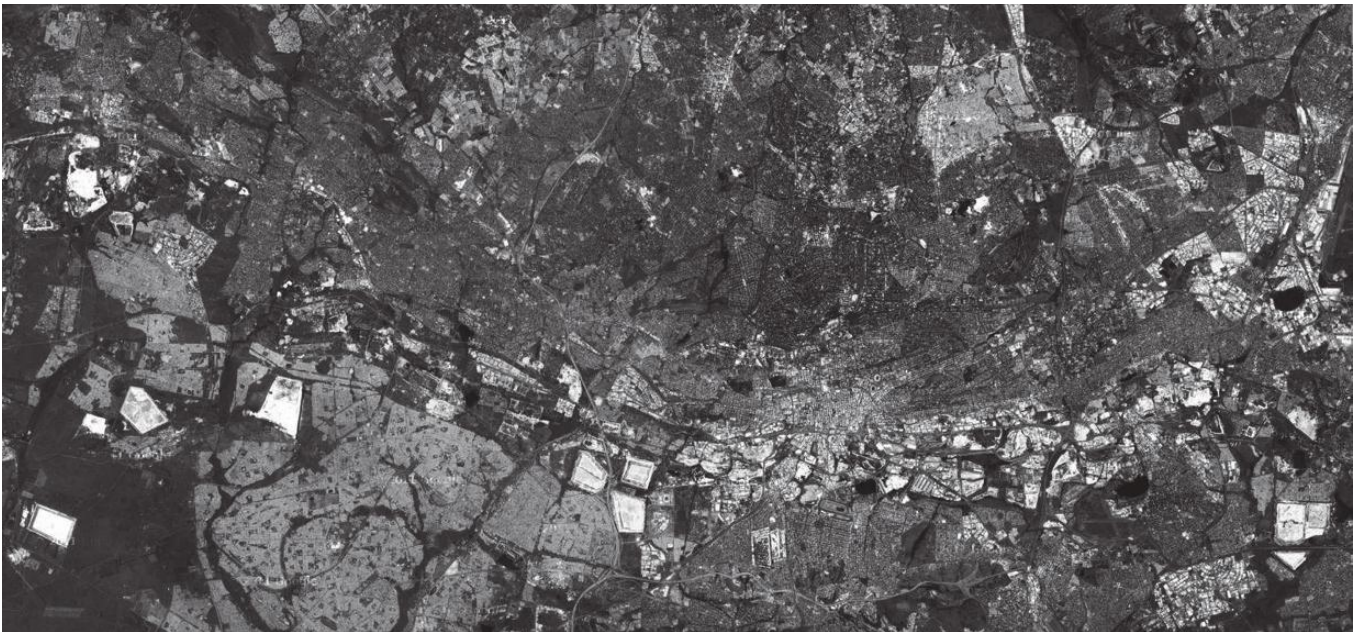
FIGURE 2 Johannesburg metropolitan area and its mining lands
(2012. TerraMetrics. AfriGIS. Google. Tracks for Africa.)

not lying on a major river or seashore. Here, the urban constitution and layout was dictated by a vein of gold. With a mere width of 20 centimeters, by now at a depth of more than 3,000 meters, the golden seam mined there is thin, yet reliable: it has produced approximately 40 percent of the entire world's gold in recorded history (McCarthy 2010, 7). The remnants of this *L'âge d'or,* giant mine dumps dispersed across the densely populated areas of the city, shape its territories and image. The current procedure is to erase most of these golden pyramids from the cityscape, in order to extract tiny amounts of gold. This contributes to a mitigation of environmental problems, however, critical notions against their elimination are what distinguish their contested societal background and spatial history, which is intrinsic to Johannesburg's urban fabric. Although the mine dumps serve as the single most identifiable symbol of the city and its most astonishing topographic feature, they remain outside of well-known categories of landscape and constitute the ground of an urban landscape in radical transition.

DUMPS

The gold mine dumps adorn every account and image of Johannesburg. These impressive earthworks are detectable all over the city. They are remainders of the gold mining industry that created the city, as well as reminders of the

unjust society that industry and apartheid brought about—emphasized by the position they occupy today, inert and idle, in the middle of the cityscape. Because of the way the city grew, the mine dumps presented themselves to be used to separate the population geographically according to racist criteria and levels of income during the apartheid years, with those at the lower ends having to suffer their toxicity, radioactivity, and hazardous dust [**FIGURE 1**]. Because the inner-city mining lands divide the rich and resourceful north from the poor and dusty south, they will prove key in any attempt of urban integration. Recent studies (GDARD 2011; SEF 2002) though, fail to make sense of the mining lands out of themselves. As open space potential is bound to being or becoming "green," they cannot be integrated into this definition. For the former gold-mining areas, only one use is declared feasible: wilderness. This is especially noteworthy, as, from a European perspective, any truly public life seems impossible in Johannesburg, being a city of "fixed encampments" (Bremner 2002, 165).

While it is quite common nowadays to make yesterday's leftovers into the architecture of today, the mine dumps cannot be aesthetized easily through architectural nostalgia. Their uncanniness renders them inexplicable. Because they are so vast, conspicuous, and unavoidable, they have the ability to

FIGURE 3 The mining land of the Central Witwatersrand.
(Courtesy of Nicole Theresa Raab, 2012)

estrange the beholder more than any other wasteland. Yet, I argue, due to their ubiquity and dominance, they still become landscapes in their own right.

Akin to the treeless veld outside the city, the mining land "is largely unmapped, dangerous, enigmatic and remains conceptually outside the city, even as it is present within it. It is also a place in which the dark underbelly of the city, modernity and racial politics intermingle." It is a revealed landscape, as "the arc of gold-bearing rock—once hidden below the vast grasslands—was brought to the surface and deposited there in huge yellow mounds strewn with the abandoned paraphernalia of mining engineering work, contaminated by the processes of gold extraction and polluting the southern lands with dust" (Beningfield 2006, 192). Being landscapes of invisibility and erasure, Jennifer Beningfield argues, the difficulty of dealing with the mining land lies in their strangeness and failure to resemble anything familiar in the cityscape. They are spaces both artificial/man-made and natural/wild.

NOT/CULTURE, NOT/NATURE

Through their mere existence, the mine dumps of Johannesburg contest traditional notions of nature and culture. Being wild, they are unkempt and deteriorated—taken over by flora and fauna. Yet, they prove evidently anthropogenic on the other side. Being man-made they are rigorously constructed, put aside for extraction technologies to advance, and later recycling as second generation waste. Their cultural background is in the way when wanting to understand them as objects of the natural realm. At the same time, their nature-like features—uncertainty, unpredictability, purposelessness—are disturbing when trying to grasp them as cultural entities.

In their constructed naturalness they very much resemble parks. Yet, while parks represent an idealized nature, the mine dumps engender an almost real nature. They constitute a landscape, an open space, that does not appear as such, but works as such: over time, a great number of emergent uses occurred on those dumps, for which they were not intended, and which are unwanted. The uses found on this non-landscape, recreational as well as subsistent, reveal that by little tactics ordinary people survive, remake the urban space, and transform the city. They "make do with what the public realm offers to them" (Bremner 2002, 166). It seems as if the mine dumps actually could have qualities of their own.

CURATING

The mine dump's ambiguity and inability to comply to neither the notion of culture nor to that of nature, provides

FIGURE 4 A mine dump landscape on the Eastern Rand.
(Courtesy of Nicole Theresa Raab, 2011)

the ground for rethinking the possibilities of their reuse through a curatorial approach. Curating in this context is understood as process of researching, selecting, planning, organizing, structuring, and framing. Through this, the environmental and social issues at hand, the individual sites in their spatial relations and particular ambiance, the larger landscape and interconnectedness of the mining land system (infrastructure and flows of toxicity), as well as the everyday informal and marginalized uses they unfold, can be addressed and synthesized. It is because the mine dumps defy the dichotomy of culture/nature, that they provide the opportunity for dealing with issues of domination of nature, nature's renitencies and its dangers, its appropriation and culturalization in the modern age.

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nature
happened
yesterday

WHO OWNS THE LANDSCAPE?

Collective Appropriations and Landscape Planning

This session is dedicated to the gradual emergence of a new collective awareness of our daily environment. There are two levels on which this may be approached: The first is to look at current forms of private, individual, and collective engagement, as expressed in projects like garden collectives, urban agriculture, and so on. But also to identify the reasons underlying this yearning for community as well as the social or community-building influence such current forms have on shaping and developing the environment. And finally, to identify new forms of ownership that are being now evaluated for landscape's future.
With this in mind, a second approach would be to spotlight and critically appraise the instruments available to landscape and environmental planners. In what way does community engagement actually lead to a fresh scope for action and to a new quality of public involvement, which accordingly requires more advanced planning instruments?
What is the role of the profession of landscape architecture within these processes? Do we need to expand landscape architecture education?

THE RIGHT TO GREEN.
PRACTICING SPATIAL JUSTICE

ELKE KRASNY
is a senior lecturer at the Academy of Fine Arts Vienna. Visiting professor at the Academy of Fine Arts Nuernberg 2013, visiting professor at the Vienna University of Technology 2014. Her curatorial work is issue-specific, reserach-based and collaborative. It addresses architecture, urban transformation, landscape, feminist epistemology and historiography and critical spatial practices.

"We want to reclaim housing, land, the right to free education. These are all elements of what I would say is [part] of reproduction." Silvia Federici [1]

Spatial justice and social justice do not always go hand in hand harmoniously. Hence, we can safely assume that it is the agonistic negotiations of power and the dire struggles of competition between spatial justice [2] and social justice, which produce the forms that human-landscape relations take on. This essay explores the potentials of reflecting on critical spatial theory and research-based case studies, in order to propose a claim to "the right to green." This right to green is understood as the radical practice of altering both spatial justice and social justice through self-organization, [3] strategies of communing, [4] and affective labor. [5]

Space being a transformative production of human societies, the issues of spatial justice, social justice, and labor are conflictively anchored and expressed in it, in both spatial and temporal terms. The pressing matters of spatial and social justice concern issues of access, use, division, allocation, and (re)distribution of space (read landscape-human relations) and labor (read human-landscape relations).

Spatial theories have been developed mostly within the field of urban studies. Historically, with urbanization on the rise, the urban was consequently constituted as the object of study and analysis in its own right. Be it the political analysis of Manchester by Friedrich Engels in spatial terms, or Chicago's spatial and economic conditions in the social analysis of the Hull House residents and the Chicago school of sociology, the urbanist hat which shapes the template of understanding new spatial relations and, in tandem with them, the emergence of new social relations. With the writings of Marxist thinker Henri Lefebvre, the urban was set as the precedent for critical spatial thought.

Interestingly enough, this comes at an expense of devaluating and marginalizing what we might want to call the rural. In this privileging of the city as the object of study, a new science was called into existence by Henri Lefebvre.

"At present, an analytical science of the city, which is necessary, is only at the outline stage. At the beginning of their elaboration, concepts and theories can only move forward with urban reality in the making, with the praxis (social practice) of urban society. Now, not without effort, the ideologies and practices which blocked the horizon and which were only bottlenecks of knowledge and action, are being overcome. The science of the city has the city as an object."[6]

Singling out the city, as the object constitutive of a new study, effectively meant two things. Firstly, it meant that the non-city, the non-urban, the rural, was in reality relegated to the back seat of study. Secondly, it meant that the very fact that the urban was always already hybrid in nature and in actuality, very much relied on the immigration of rural knowledges and the incorporation of these agrarian components into the processes of urbanism. Lefebvre joins the urban with the political claim for a new humanism, an urban humanism. This comes at the expense of the rural or agrarian, perhaps the notion of a rural humanism, or, as I would like to suggest, a (new[7]) rurban humanism.

"We thus must make the effort to reach out towards a new humanism, a new praxis, another man, that of urban society. We must avoid those myths which threaten this will, destroy those ideologies which hinder this project and those strategies which divert this trajectory. Urban life has yet to begin. What we are doing now is to complete an inventory of the remains of a millenarian society where the countryside dominated the city, and whose ideas, values, taboos and prescriptions were largely agrarian with rural and 'natural' dominat features. A few sporadic cities hardly emerged from a rustic ocean. Rural society was (still is), a society of scarcity and penury, of want acepted or rejected, of prohibitions managing and regulation privations. … A decisive remark: for the crisis of the traditional city accompanies the world crisis of agrarian civilization, which is also traditionl. It is up to us to resolve this double crisis, especially by creating with the new city, a new life in the city."[8]

A by far older dichotomy, constitutive of the epistemological thinking in a binary opposition of the rural and the urban, resurfaces in Lefebvre's political thought. Rather than moving towards a "rurban," or suggesting the object of study to be "rurbanity" or "rurbanism," it is the city that is privileged over the country and thus urbanity, urbanism, and the urban. Lefebvre clearly points to the dual nature of the crisis, the crisis of the city and the crisis of the agrarian. Yet he stops short of seeing it as one crisis unfolding on different planes, and he also stops short of calling forth a new life in the rural.

The right to green actually pushes against Lefebvre by joining his famous proclamation of the right to the city, which he first proposed in his 1968 book *Le Droit à la ville*. This means I am indebted to Lefebvre's thinking and drawing upon his resources to put forward the right to green. At the same time, I am trying to clarify my own position which is one that at once joins Lefebvre's proclamation of a right to the city, but refuses his continued and traditionalizing dichotomy, in effect splitting the city/urban from the rural/agrarian. I understand the right to the city to include the right to green, and vice versa. This of course complicates matters.

Even though I share Henri Lefebvre's argument of the "crisis" and, more importantly, share in his argument from a transhistorical perspective, that crisis is, in effect, always the state of urban affairs, I do not see the crisis in the city and the agrarian crisis as a dual crisis. On the contrary, I see it as a single crisis, which is interrelated on many levels and scales. Let me proceed by introducing two positions, which will help clarify matters between the urban and the rural. I see the one crisis, which unfolds in both the city and the agrarian, as being rooted in capitalist expansion and large-scale high-modernist planning.

In the introductory chapter to *Caliban and the Witch: Women, The Body and Primitive Accumulation*, a study of the development of labor power and self-ownership, feminist Marxist Silvia Federici expounds on the motivations behind her work, in which she offers a succinct explanation behind the "one crisis" in both its historic and contemporary version. Federici speaks of:

"the worldwide return with, with the new global expansion of capitalist relations, of a set of phenomena usually associated with the genesis of capitalism. Among them are a new round of "enclosures" that have expropriated millions of agricultural producers from their land, and the mass pauperization and criminalization of workers, through a policy of mass incarceration recalling the "Great Confinement" described by Michel Foucault in his study of history of madness. We have also witnessed the worldwide development of new diasporic movements accompanied by the persecution of migrant workers, again reminiscent of the "Bloody Laws" that were introduced in the 16th and 17th-century Europe to make "vagabonds" available for the local exploitation."[9]

The crisis that we see unfold here is a crisis of two, closely intertwined and large-scale forced movements—the forcible removal from the land on one hand, and forcible confinement on the other hand.

In his study *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, anarchist scholar James C. Scott analyzes high-modernist's, state-enforced social engineering.

"As long as common property was abundant and had essentially no fiscal value, the illegibility of its tenure was not a problem. But the moment it became scarce (when "nature" became "natural resources," it became the subject of property rights in law, whether of the state or of the citizens. The history of property in this sense has meant the inexorable incorporation of what were once thought of as free gifts of nature: forests, game, wasteland, prairie, subsurface minerals, water and watercourses, air rights (rights to the air above buildings or surface area), breathable air, and even genetic sequences, into a property regime. In the case of common-property farmland, the imposition of free-hold property was clarifying not so much for the local inhabitants—the customary structure of rights had always been clear enough to them—as it was for the tax official and the land speculator."[10]

James C. Scott lets us see in his study how the state's incessant strive for legibility and taxability is based on the spatial logic of the grid. This penetrates landscapes, fields, plantations, cities, streets, houses, and subjects alike. Space and body both are subjected to logics of legibility and accountability. Therefore, I understand the prolonged argument of a persistent dichotomy of the urban and the rural to be an artifical construction.

The right to green opposes Lefebvre's split of a dual crisis that divided the urban from the rural, the city from the village. This binary dichotomy not only refers to a spatial politics, but equally important to a certain chronopolitics.

"The word "urbane" (adj.) stems directly from the French urbain and indirectly from the Latin word urbanus. It first entered the English language in the mid-16th century to mean "of or pertaining to the city" as well as "having the qualities or characteristics associated town or city life; elegant and refined in manners, sophisticated" (Oxford English Dictionary). In the early-17th century the latter sense prevailed, with "urban" coming to donate the former. The word "urbanity" (noun) contains both senses. The terms urban (adj.) and Urbanität (noun) entered the German language in the 18th century and indicate both "education and worldliness" as well "town atmosphere." "[11]

The same sixteenth and seventeenth century Europe to make "vagabonds' available for local exploitation," defined the city as a space whose inhabitants developed the capability to bring forth (their own) urbanity. They became distinguished from the non-urbans by investing in the formation of an urban subjectivity, by becoming well-spoken, well-articulated, by becoming well-educated, well-mannered, and well-(in) formed. The new arrivals to the city, the consecutive waves of rural-to-urban migration and trans-national (rural) to urban migration, meant that the newcomers to the city were deemed to be the ones who had to adapt to this project of the urban. The new arrivals from the countryside were thought to be lagging behind; they were anachronistic in their language, their articulation, their education, their manners, their behaviour, and their formation. Therefore, they had to be informed and transformed in order to be turned into urban citizens. Urbanism—which is conventionally understood as urban development and spatial transformation following the dynamic cycles of change, of investment in housing stock, businesses, or public infrastructures—should equally be understood as this social process of subjects' formation into urban citizens. Seen from this vantage point of a twofold meaning, urbanism consequently also entails the process of continuous (self-) formation that turns newly arrived urban dwellers into fully formed urban citizens. Historically this meant leaving behind the characteristic traits and knowledges of the rural.

If the crisis of the urban and the crisis of the rural are not a dual crisis but a single crisis manifested in different locations, and if urbanism is also to be understood as a social process, then we come to see how the rural impacts on the urban in its process of transformation. Historically, the enclosure of commons and large-scale, state-led projects of modernization impacted on the landscape of the rural as well as the urban. Maximum yield was the goal, be it from housing, the assembly lines, or the fields.

I would now like to proceed by joining these two lines of thought to arrive at a conceptualization of the right to green and of "hands-on urbanism."[12] If the urban and the rural are in fact affected by the same crisis, then the rural and the urban are intricately connected with each other. Not only do the new arrivals, the rural-to-urban immigrants become urban citizens, they also transform the urban by bringing the rural with them into the city. Therefore, the rural has never quite left the city and is indeed very much part of its growth, its knowledges, its social relations, and its resilience. The right to green becomes part of a right to the city, which is enacted by those who migrate to the cities and who embed their rural knowledges into the urban fabric. Rather than opposing the urban and the rural, the opposition between the modern/future-oriented urban and the traditional/anachronistic rural, I want to think of a co-presence of both in the hybrid condition of what I want to call rurban. Rurbanity then becomes indicative of how city dwellers are able to develop resilience, in order to self-manage when having to cope with the urban crisis. Migrating knowledges merge and become part of a radical hands-on urbanism, drawing on the agency of activists, artists, architects, immigrants, rural-to-urban migrants, educators, gardeners, landscape planners, volunteers, and city administrators.

This now is, as I have tried to suggest, the basis for collective struggles for the right to green, as a self-organized practice

of spatial justice and urban commoning. Let me introduce two case studies that are of particular interest here. Urban agriculture and urban gardening not only bring new life and food to city centers, urban peripheries, shrinking citites, or informal settlements, they equally serve as a driver for conviviality, commoning, solidarity, and affective labor.

The first case study is the community garden movement in New York. Since the nineteenth century, the Bowery (the official name of the first community garden was Bowery-Houston Community Farm and Garden) on the Lower East Side has epitomized the struggle to survive in New York City: poverty, crime, and vacant lots. The Lower East Side has traditionally been an area of immigrants and workers. *De Bouwerij* is an old Dutch word for *farm*. The name is a remnant that can be traced back to the Dutch colonialists who settled in the area. During the urbanization processes of the second half of the nineteenth century, the Bowery became a hotbed of prostitution and a meeting place for gays and lesbians.

The revolutionary upheaval of 1968 and the first oil crisis in 1973 were followed by a financial, economic, and housing crisis that created an environment, in which a lot of imagination and activism was required to envision flowering gardens and neighborly interaction, in place of rubbish-strewn vacant lots tagged for property speculation.

In 1973, the community garden movement began to take root in the Bowery. Historiographically we can therefore draw a line from De Bouwerij, the farm, to the Bowery with its community gardens. The Office of Housing Preservation and Development leased a vacant lot to the Bowery-Houston Community Farm and Garden in April 1974, for the symbolic sum of one dollar.

"By 1977, there were more than 25,000 vacant lots in New York. Littered with trash and rats, these open sores became magnets for drugs, prostitution, and chop shops for stripping down stolen cars. … Fed up with government inaction, in 1973 an impassioned artist named Liz Christy and a band of like-minded activists called the Green Guerillas began taking over abandoned lots on Manhattan's Lower East Side."[13]

Artist Liz Christy,[14] a local resident, initiated New York's first community garden. Together, a vacant lot was secured, cleared, and used for community gardening and farming. Liz Christy founded the Green Guerillas, a group that is still in existence today. The Green Guerillas became educational gardening activists. Education, as part of the urban self-empowerment process, has been a central aspect of the history of self-organized movements ever since the foundation of garden allotments. The Green Guerillas organized workshops and provided instructions on how to garden in the city for the neighborhood. This initiative remains active

FIGURE 1 Ma Po Po Village, Hongkong, photo: Shu-Mei Huang, 2011

FIGURE 2 Ma Po Po Farming Graduates, photo: Becky Au, 2011

FIGURE 3 District Council Community Forum, photo: Ho-man Au, 2011

to this day. A part of the community gardening strategy is to create and enact clear garden rules for organizing volunteer participation in the garden.

The Nuyoricans, the Puerto Rican community in New York, played a central role in the establishment of an informal gardening tradition on the Lower East Side, with the Loisaida Casita Gardens. Interestingly, it is the immigrants from Puerto Rico who identify most with bottom-up urban development and self-help processes. They came to the United States from a country that was the first in the world to anchor self-help building laws in national legislation.

"At Loisaida—a migrant pronunciation of New York's Lower East Side—Puerto Rican populations have worked since the early 1970s with members of different generations of the American counterculture to produce a vibrant variety of community gardens among the many vacant lots produced as a result of the property crash and bankruptcy of the early 1970s financial crisis in New York when over 3,400 units of housing were demolished in Loisaida alone."[15]

Utopian political fantasies emerged from this process of urban development from below, as well as the act of putting down roots, undertaken by an immigrant community who transferred the spatial practices of their homeland to their new home: "the Lower East Side Autonomous Zone (LESAZ) will be declared—popularly known as Loisaida Libre."[16] In the nineteen-seventies, the Council on the Environment of New York City counted 783 community gardens.

From 1994 to 2001, under Mayor Rudy Giuliani, a publicized battle took place over community gardens. The gardens of poor urban migrant populations were the foremost targets of destruction.

"Regardless of their politics, ethnicity, or social class, the harshest factor the gardeners confront is their lack of a legal right to the property they care for."[17] With changing immigration patterns, pressure for use of the gardens rises, and with it the potential for conflict about who has what rights in which gardens."[18]

While it was possible to build identification, belonging, emancipation, and authenticity through the homogeneous ethnic communities in the nineteen-seventies, today's struggles for garden use rights are far more complex. Not only do neoliberal conditions fragment the subjects, thus creating yet another hurdle to the creation of solidarity and community, but immigration patterns have also changed and multiplied. The authenticity of the gardens lay with their articulation of civil society's right to city, and the responsibility to build, maintain, and manage the gardens and the communities that arise from this right. Authenticity is being pressured by globalization.

"Because many Puerto Ricans, African Americans, and Caribbean Americans have taken a leadership role in community gardens, ethnic identity emerged as another important kind of authenticity. The strong ties of the gardeners' common origins gave their gardens life and opened the way to using public space to express ethnic identity. But, with immigration and gentrification continuing to change local demographics, this form of authenticity is hard to maintain. Community gardens need to create roots for all newcomers and develop an organizational structure that survives any single group."[19]

Today, the Lower East Side stands high on the list of America's Most Endangered Places. The area's history and spirit are both exploited and threatened by gentrification, classy boutiques, expensive restaurants, and luxury condos. The community gardens create an oasis of green that defies the logic of capital intensity by withdrawing valuable land from the market and yet, paradoxically, continuously contributing to the rising values of surrounding land and homes.[20]

The community garden movement in New York exemplifies how the migratory rural knowledge becomes parts of hands-on urbanism and self-help organizing. A sense of belonging is produced throught the right to green. Processes of amelioration are complex; value is not only instilled through a sense of belonging and the affective ties of effectively producing and reproducing urban communities. Market value is also a very real effect in real estate terms and real estate appraisal. So, the processes of appreciation in value that initiated in part the enactment of the right to green have become part of the continued struggles of spatial justice, of access, and coontinuation of the green oases created.

The second case study is Ma Po Po Farm in Ma Shi Po Village in Hong Kong's New Territories. There is much conflict in the village of Ma Shi Po. The political and economic power structures of Hong Kong's New Territories are reflected in the built environment, informal architecture, land use, and land rights of this village. The families who lived here prior to the 1898 occupation by the British Empire are considered natives, and cannot be forced to sell their land. After the Second World War, the conflict between the Communist Party and the Kuomintang caused waves of refugees to flee from Mainland China. Many settled here, leasing land from the natives, who gradually migrated into the center of Hong Kong, or even the United Kingdom, but retained ownership of their land. The settlers erected squatter houses on their rented land. In 1980, this type of informal settlement was prohibited. In 1982, and then again in 1984–85, all unofficially built homes in Hong Kong were registered by the Squatter Control and Clearance Office. The city's official urban development plan moves toward the urbanization and densification of the New Territories, designating the area as residential

and industrial. The continued existence of traditional green areas, farms, fishponds, and rice fields is under threat.

Most of the farmhouses in Ma Shi Po were built informally and incrementally. Leung Jing, who still lives in Ma Shi Po today, is a builder who worked with the villagers to construct their homes. He fled with his parents from Mainland China in 1947. After apprenticing as a carpenter, he worked for three years as a construction worker in what was then the British Empire in Malaysia. He implemented his knowledge of construction methods—in particular, ventilation in humid tropical climates—upon returning to the villages in the New Territories. He began to build informal, sustainable architecture from recycled materials. Today, this architecture is threatened with demolition and about to be replaced with what developers now call "green development."

Ma Po Po Farm in Ma Shi Po, recently founded by Becky Au, is resisting. Becky Au, a young village woman returning to Ma Shi Po Village from her successful career in downtown Hong Kong, initiated a community farm based on the principles of permaculture. Together with the villagers, Hong Kong activists, artists, and local schools, she is trying to create a resistance movement and save the village. Led by Becky Au, the group has worked closely with elderly villagers in particular, but also with activists from Hong Kong, who participated in workshops on urban agriculture, permaculture, soap making, and bread baking. Dedicated to the preservation of the village, a group of thirty activists decided to work part-time as farmers. Educational partnerships with schools and public consultations with local government officials are held in the Ma Po Po Farm tent. Self-organization is key. Not only has the group relied wholly on self-management and self-organization, they also focus on communal tending of the land and transferring knowledge between farming, the arts, sustainability, and community organizing, in order to make the village culture part of the contemporary urban landscape. They introduced a knowledge transfer between traditional farmers, permaculture experts, and neo-farmers, who refer to themselves as part-time farmers, they also organize community consultations with the local municipality. The official urban development strategy is one of cooperating with the purely monetary interests of developers. The land is bought and the fields left fallow in order to then rezone the property from agricultural land to (much more profitable) building land. Residents are resettled or evicted. Even though the long-term perspective for Ma Po Po Farm and Ma Shi Po Village are rather bleak, ties of solidarity and a sense of belonging are created between the subjects of resistance and the landscape they tend. These ties attest to the villagers' continued practice of spatial justice and sustained affective labor. The right to green exerts the villagers' practice of their right to the city.

Both of these case studies exemplify the frontiers within urban transformation and urban expansion. The shifting power relations between the rural and the urban, the agon within rurbanity, redefines the practice spatial and social justice. These borders are constantly under contestation and negotiation. The borderland between the rural and the urban is the (not so) new war zone between private and public interests, formal and informal strategies, and planned and unplanned urban development. This is the zone of a politics of radical participation, social struggles, and citizens' movements. It is the shifting (and mobilized) borderland, where the right to green and the right to the city as practices of spatial and social justice are pursued.

1 http://urbanhabitat.org/19-2/rudmanrein-federici
2 On spatial and social justice see: David Harvey *Social Justice and the City*, Baltimore: John Hopkins University Press 1973 and Edward W. Soja *Seeking Spatial Justice,* Minneapolis University of Minnesota Press 2010.
3 On self-organized relationships of care see: J.K. Gibson-Graham, Jenny Cameron, and Stephen Healy, *Take Back the Economy. An Ethical Guide for Transforming our Communities,* Minneapolis and London: University of Minnesota Press 2013.
4 On strategies of commoning see: Maria Mies and Veronika Bennholdt-Thomsen *The Subsistence Perspective: Beyond the Globalised Economy,* Trans. by Patrick Camiller. London: Zed 1999.
5 On affective labor see: Silvia Federici: *Caliban and the Witch. Women, the Body and Primitive Accumulation,* New York: Autonomedia 2009.
6 Henri Lefebvre *Writings on Cities*. Selected, translated and introduced by Eleonore Kofman and Elizabeth Lebas. Oxford and Malden: Blackwell Publishers 1996, p. 148.
7 By now I mean that new arrivals to the city always produce the rural anew. This process however is not at all new in the cycles and processes of urbanization. On the contrary, rural to urban migration, both internal migration and external migration, is very much part of ongoing processes of rurbanization, or what we might want to call rurbanism.
8 Lefebvre, op. cit., p. 150.
9 Silvia Federici, *Caliban and the Witch. Women, the Body and Primitive Accumulation,* New York: Autonomedia 2009, p. 11.
10 James C. Scott, *Seeing Like a State. How Certain Schemes to Improve the Human Condition Have Failed,* New Haven and London: Yale University Press, p. 39.
11 Martina Baum, *Urbane Orte—Ein Urbanitätskonzept und seine Anwendung zur Untersuchung transformierter Industrieareale,* Karlsruhe: Universitätsverlag, 2008, p. 17.
12 *Hands-on Urbanism* 1850-2012. *The Right to Green* is an exhibition and a book by this title which I curated and edited in 2012. Hands-On Urbanism was first shown at the Architecture Centre Vienna in 2012, at the Architecture Biennale in Venice 2012 and then at the Museum for Contemporary Art Leipzig. The two case studies cited in this essay, the Liz Christy Community Garden in New York and Ma Po Po Farm in Hong Kong are based on my curatorial research. See: Elke Krasny *"Hands-on Urbanism 1850-2012. The Right to Green,"* in Elke Krasny, Architekturzentrum Wien (eds) Hands-on Urbanism 1850-2012. The Right to Green, Hong Kong: mccm creations 2012, pp. 8-37.
13 Sarah Ferguson, "A brief history of grassroots greening on the Lower East Side," in Peter Lamborn Wilson and Bill Weinberg, *Avant Gardening. Ecological Struggle in the City and the World,* New York: Autonomedia 1999, p. 83. Cited from George McKay, Radical Gardening. Politics, Idealism & Rebellion in the Garden,
14 Christy passed away in 1985, and the garden was renamed the Liz Christy Garden in remembrance.
15 J. Miranda Martinez documents this previously unwritten history in her 2006 publication, Power at the Roots. *Gentrification, community gardens, and the Puerto Ricans of the Lower East Side.*
16 George McKay, op. cit., p. 171.
17 Sharon Zukin *The Naked City. The Death and Life of Authentic Urban Places,* New York: Oxford University Press 2011, p. 217.
18 See: Müller, Christa (ed.) *Urban Gardening. Über die Rückkehr der Gärten in die Stadt*, Munich: oekom 2011.
19 Sharon Zukin, *The Naked City. The Death and Life of Authentic Urban Places,* New York: Oxford University Press 2011, p. 217.
20 Miranda J. Martinez presented this previously unwritten history of the city in her 2006 book, Power at the Roots. *Gentrification, Community Gardens, and the Puerto Ricans of the Lower East Side.*

THE RIGHT TO LANDSCAPE

COMMENT BY ELKE KRASNY, VIENNA

My comment on the panel "The Right to Landscape" takes on the form of questions. What could be meant by "The Right to Landscape" if we define it as a right granted to human beings so they can pursue their personal well-being, and one that is philosophically and legally modeled on an understanding of universality. This would be the foundation of the 1948 Universal Declaration of Human Rights by the General Assembly of the UN.
The very first question was raised by one of the participants in the discussions ensuing the presentations.
Does the right to landscape conflict with the right *of* landscape?
Is it possible to reconcile the two?
Is the disparity and space for potential conflict, created here by such a dichotomy, in fact the continuation of the philosophical concept of an older dichotomy, namely that of culture versus nature?
What about nature-within-culture? What about culture-within-nature?
The theory and practice of landscape comprises nature-with-culture and culture-within-nature.
The right to landscape is therefore the right to nature-with-culture and the right to culture-within-nature.
The right of landscape is therefore the right of nature-with-culture and the right of culture-within-nature.
Hence, both, practice and theory of landscape architecture must conceive of a radical politics of agency on the move from the right to landscape to the right of landscape.
How, in practical terms, can we go beyond the various oppositions and conflicts inherent in this theoretical and practical disparity?
How can the right of landscape be included within a right to landscape and vice versa?

TRANSGRESSIVE URBANISM
BORDERLANDS AND URBAN INFORMALITY OF AMERICAN CITIES
ALONG THE PAN-AMERICAN HIGHWAY

CRISTIAN SUAU
University of Strathclyde,
Department of Architecture, Scotland
suau@ecofab.org

Dr. Cristian Suau holds a PhD. in architecture and master's in urban design from ETSAB, Barcelona. He was project leader at OMA, Rotterdam. He has obtained several international housing and urban design awards such as EUROPAN Norway (2006) and newly Bicentenario Chile: Rambla for Citizenship (2012). Currently he is senior lecturer at the University of Strathclyde, Glasgow. His research covers experimental architecture, theory of architecture, ecological urbanism, and landscape, through international publications, scientific events, and design workshops. He is the scientist in charge of the FP7 Marie Curie project titled "Euro-Mediterranean Urban Voids Ecology" (2013) and member of various scientific networks such as AHRA, DOCOMOMO, EAHN, and PLEA. He leads ECOFABRICA: www.ecofab.org

political geography / infrastructural urbanism / border cities and informality

PREFACE

Border conditions are connected to the establishment of socioeconomic forces that rule the production and occupancy of everyday spaces in cities. This phenomenon creates a "new geography of centrality and marginality" (Bayat 2000), which is characterized by contestation, internal asymmetries, and discontinuous transgressions between territories in friction, mainly in borderlands and border towns.

How do these urban dynamics operate and interplay between international, regional, and urban frontiers? Economists have pointed out that urban forms have often been driven by neoliberal forces (Brenner, Peck, and Theodore 2012) with a stark increase in regional and global dissimilarities, growing environmental problems, displacement of rural communities, extension of slums, informal employment, and the dismantling of socio-environmental protections (Davis 2006).

This study explores the ways in which political boundaries can be trespassed in order to develop subaltern forms of urbanism and edge conditions, mainly to the comparative study of border cities in the Americas, predominantly ruled by informal economies, and which are situated alongside
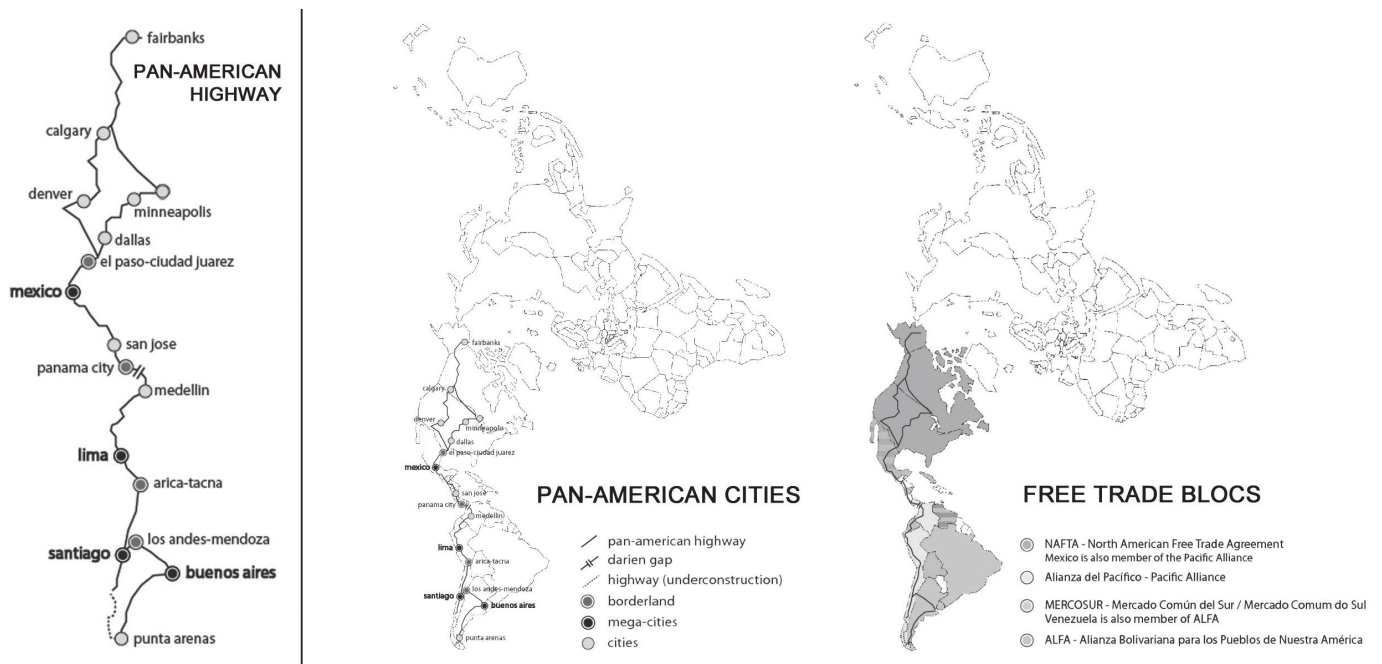
FIGURE 1 Comparative maps of borderlands, edge, and mega-cities (left) and main free trade blocs along the Pan-American Highway (right). (Source: Cristian Suau)

the largest land-transport infrastructure on Earth called the Pan-American Highway. This land transport corridor operates as a grand linear urbanism and constitutes the economical catalyst of emerging urban economies in scenarios of political regional integration. In terms of regional development, one of the direct impacts of the of the Pan-American Highway—from Alaska to Patagonia—has been the expansion of formal and informal trade corridors along this main infrastructure network, which is shaping the urban structure of border cities.

This type of "instant urbanity" constructs transitory, intermittent, and spontaneous urban conditions that flee from any conventional planning. This study reveals new spatial principles and configurations of "informalism" applied in the border cities of Latin America, mainly the borderlands of Tacna (Peru)—Arica (Chile) and El Paso (US)—Ciudad Juárez (Mexico) **[FIGURE 1]**.

What are the functional, morphological, or environmental impacts of temporal activities in existing border cities along main transport corridors? How do those informal systems mutate, resist, or perish? Border conditions of American cities are governed by informal economies that expand or constrain alongside land-transport infrastructures, passageways, gateways, and trade zones. These corridors operate as "linear urbanism" that constitute the catalyst of urban

economies. It reflects on the "metapolization" (Ascher 2004) of border cities, specially regarding the transformation of urban voids. Methodology involves selective literature review, data collection, and spatial analysis, as well as geo-urban analysis and mapping (inclusive transects and photographic recording), and fieldworks.

BORDERLANDS, URBAN TRANSGRESSION, AND INFORMALISM

Urban form follows economic flows. Nowadays American nations are currently facing important challenges in the arenas of political geography and regional planning, mainly by the management of urban regional integration triggered by the increased trade, people's mobility, and unprecedented socioeconomic pressures. Latin American cities are experiencing a new phase of modernization towards urban-based economies. American informal economies constitute a dynamic urban process, which includes many aspects of economic and social urban theories (Castells 1989). According to Manuel Castell, the phenomenon of informal economy constitutes "a major structural feature of society both in industrialized and less develop countries" **[FIGURE 2]**. American border cities perform like strategic economic region gateways. These border conditions are defined by visible/invisible, hard/soft, formal/informal, isotopic/

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FIGURE 2 Checkpoints along the Pan-American Highway: Arica-Tacna (left) and El Paso-Juárez (right). (Source: Cristian Suau)
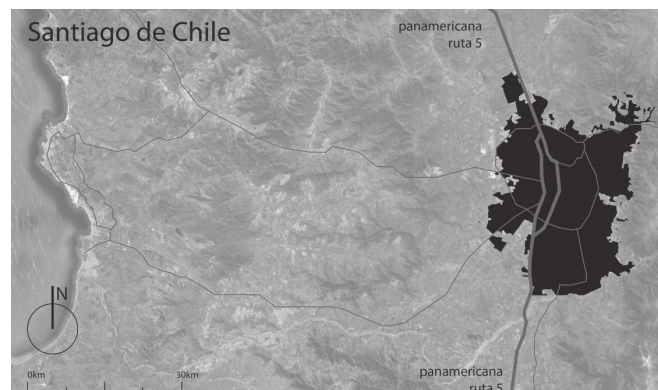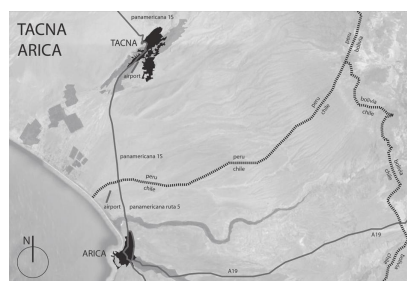
FIGURE 3 Comparative map: Santiago de Chile (left) and the borderland Arica-Tacna (right). (Source: Cristian Suau)

heterotopic environments. They can fluctuate from highly dense strips to uninhabited borderlands, both vulnerable to processes of demographic shrinkage, industrial abandonment, or ecological dereliction. Borders delineate interurban (within cities), transurban (between various cities), and transregional (between more regions or countries) informal spatial manifestations. This intermittent dynamic generates "liquid landscapes," which are neither functionally nor environmentally balanced but asymmetrically distributed. Informal borderlands are places of heterotopia. American cities are characterized by strong tensions between what is vaguely described as their formal and informal magnitudes. Nevertheless, the terms formal and informal refer not only to the physical materialization of unregulated economies but also to the entire socio-urban tissue. Informal commerce exceeds any structure of order, control, and homogeneity available in a consolidated city. Informality in border towns is expressed as discontinuous, heterogeneous, and socially multipolarized bands. The Pan-American Highway operates as "transgressive urbanism" and constitutes the economical catalyst of emerging urban scenarios [FIGURE 3]. How do informal spaces interplay with each other? The "space of flows"—either commerce or housing—constructs new urban patterns that are transitory, elusive, or spontaneous, which escape from any conventional spatial planning

and are driven by the premises of continuity, diversity, and hybridity (Ascher 2004).

The key urban feature of border towns in Latin America is manifested in the everyday informal system of trade, which is outside state controlled or money-based transactions. It includes exchanges of goods and services, mutual self-help, unclassified jobs, street vending, and other manifestations. However, what are the spatial impacts of informality in border towns? Urban informality is spatially expressed in distinctive forms of retail and housing configurations. Informal commerce, mainly defined by fairs and street trading, is a common practice in border towns. For instance, the urban informality in the borderland of Arica (Chile) and Tacna (Peru) is a soft border, mainly associated to precarious housing and sporadic commerce. It is commonly allocated at the gateway areas of urban limits and adjacent to the main highway. Even the political boundary is currently a subject of diplomatic disputes; citizens of both countries regularly migrate and trade without visa control. On the contrary, informality between the borderland of El Paso (US) and Ciudad Juárez (Mexico) represents a hard border. The borderline of Rio Grande is one of the most militarized and controlled migration zones on Earth. It is also characterized by illicit retail, which is trafficked immediately after the checkpoints of each border. One example of informal commerce is the Fox

FIGURE 4 Aerial view over El Paso facing the Chihuahuita District and gateway. (Source: Cristian Suau)

FIGURE 5 Streetscape view of Ciudad Juárez. (Source: Cristian Suau)

Market—a triangular parking lot—situated only two kilometers away from the US gateway. What types of transformable configurations generate those urban fabrics? In doing so, the study identifies distinct informal types of commerce and housing in both border towns. They are categorized as macro-spaces (food fairs, flea markets, shanty towns) and micro-spaces (street vendors, push-carts, cardboard houses).

EL PASO-JUAREZ, CROSS BORDER CITY

The Chihuahuan Desert surrounds El Paso. El Paso is located at 31°47'25''N 106°25'24''W, at the intersection of Texas, New Mexico, and Chihuahua states. El Paso is the nineteenth most populated city in the United States of America. In Texas (US), borderland commerce can be highly categorized into informal or underground urban economies. The illicit economic activities increase when residents perceive the state's intervention in the impoverished *colonias* or slums as illegitimate, whether in the form of fees, taxes, or regulation (Richardson and Pisani 2012).

The metropolitan area's population in 2010 was 800,647 inhabitants. The city has a total area of 648.9 km². El Paso has historically been predominantly 80% Hispanic (75% are Mexican). Density is 873.7 inhabitants/km² (census 2010). El Paso and Ciudad Juárez represent a situation of asymmetric patterns of urban informality [**FIGURE 4**].

The Rio Grande River defines the border between El Paso and Ciudad Juárez to the south and west. The two cities form a conurbation called "El Paso-Juárez" with a population of two million (two-thirds of which reside in Juárez). El Paso and Ciudad Juárez comprise the second largest border metropolitan area on the US-Mexico demarcation [**FIGURE 5**]. Ciudad Juárez is a large city in the Mexican state of Chihuahua. It is located at 31°44'22''N 106°29'13''W. "El Paso-Juárez" is one of the fourteen cross-borders along the US–Mexico limit. Ciudad Juárez has grown substantially in recent decades due to a large influx of people moving into the city in search of jobs; more than 300 *maquiladoras* or assembly plants are located in and around the city. This rapid economic growth has created *colonias* or slums. The city had 1,321,004 inhabitants (census 2010). The average annual growth in population over a period (1990–2000) was 5.3%. It is one of the fastest growing cities on the planet despite being called "the most violent zone in the world outside of declared war zones" [**FIGURE 6**].

INFORMAL COMMERCE: FOX FLEA MARKET (EL PASO)

Informal commerce in El Paso (US) has been banned in the city core whilst it still remains strong in the impoverished suburban areas like Tejas, Chamizal, or Segundo Barrio. As a result, the informal market has been shrunk and expelled
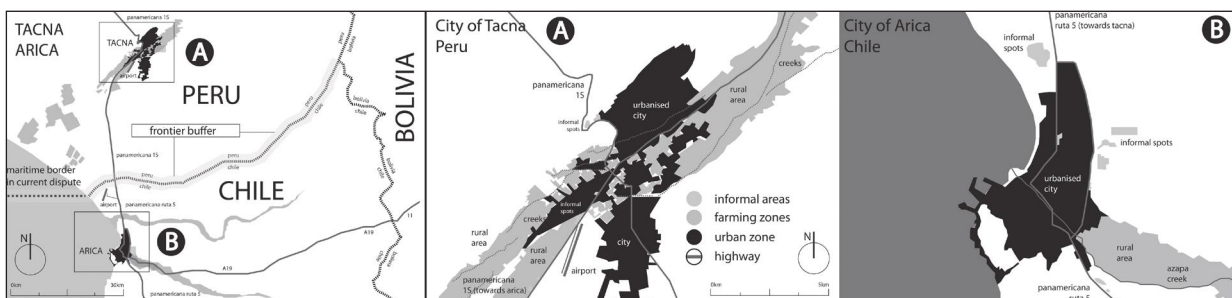
FIGURE 8 International frontier between Chile and Peru. (Source: Cristian Suau)
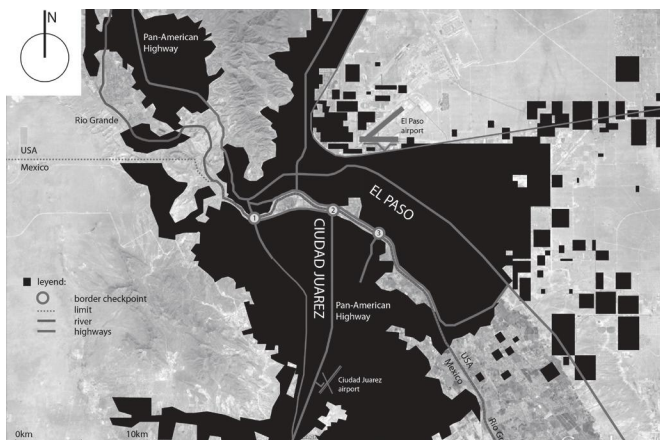
FIGURE 6 Map of El Paso-Juárez facing main road and border checkpoint. (Source: Cristian Suau)

FIGURE 7 Fox Flea Market, El Paso. (Source: Cristian Suau)

and concentrated in less visible spaces backwards. Fox Market constitutes a vivid expression of Hispanic informal economies that are excluded in the formal sector. It is well-known as a marketplace for local trade and gathering. Situated in a disused large parking lot, it offers a weekly polyvalent usage [**FIGURE 7**].

The phenomenon of informal macro-commerce consists of domestic trade that resembles the extension of dwellers' backyards. Informal trade in marginalized areas of El Paso enhances the sense of everyday appropriation of vacant spaces.

BORDERLAND BETWEEN ARICA AND TACNA

The largest informal economy in Latin America is Bolivia with 67.1%, followed by Panama with 64.1%, and Peru with 59.9%. The lowest informal economy is Chile with 19.8%, similar to the OECD-West European countries' average (Schneider 2002).

Arica is located at 18°29'S 70°20'W. It is a port city with a population of 185,269 people and situated only eighteen kilometers South of the Peruvian border. Arica spreads out into the coastal desert and the borderline. Arica city has 185,441 inhabitants within an area of 41.89 km². Arica province spans an area of 4,799.4 km² and has 213,595 inhabitants. 95.7% of the population lives in urban areas and 4.3% in rural areas (census 2012). Economically, it is an important

port for minerals, agriculture, and tourists. It is also the hub of train networks with La Paz (Bolivia) and Tacna (Peru). Many people cross the *Linea de la Concordia* border daily to travel between cities [**FIGURE 8**].

Tacna is an inland city in southern Peru. It is situated at 18°03'20"S 70°14'54"W, on the border with Chile. 242,451 people live in Tacna. It is located only thirty-five kilometers north of the border with Chile. Tacna is a very commercially active city with many immigrants from the *Altiplano* (Puno Region). Its economy is based on mercantile activities with the ports of Arica and Iquique (Chile). Since it is a duty-free zone, Tacna has one of the largest artifact markets in the world, with imports from Japan and China, and traditional Peruvian handicrafts. Currently, commercial integration between Arica and Tacna is increasing due to free trade schemes, duty-free zones, and improved transport infrastructure.

INFORMAL HOUSING: BEYOND "ZONA URBANA" (ARICA)

This illegal settlement is made with reclaimed cardboard and shipping pallet boards supplied by the agro fairs. It is situated outside the urban limit of Arica (east end), between the Azapa Valley and the Pan-American Highway. Mostly Peruvian immigrants live in *"casas de carton"* (cardboard houses). Dwellers are often not covered by formal surveys.
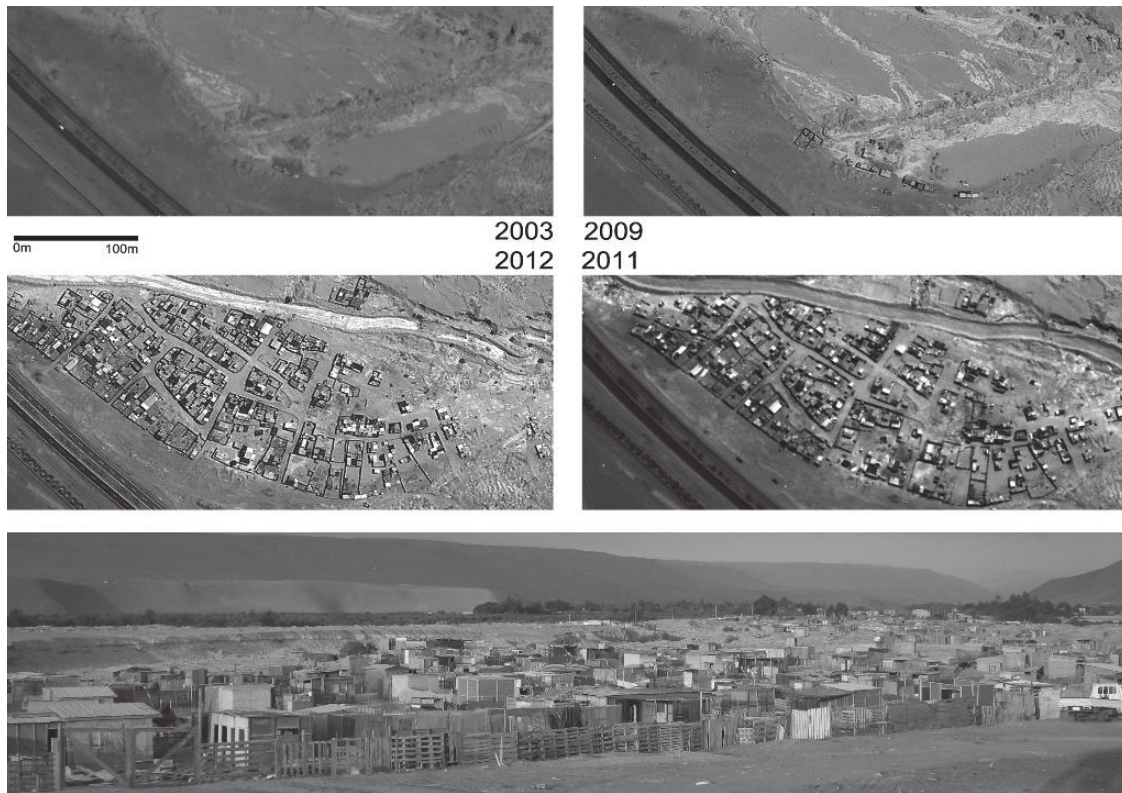
FIGURE 9 Informal immigrant settlement outside Arica, Chile. (Source: Cristian Suau)

They are not officially recognized by the municipality. This slum also lacks basic services, including medical, sanitary services, and fire regulations.

We can envisage many processes, by which dwellers might gain access to public housing schemes through the purchase and land management of affordable subdivided agricultural land, densification of the settlement by adding floors, and management of an adequate level of public infrastructure (water, sanitation, and power) and urban services (education, environmental health, and social amenities) [**FIGURE 9**].

CONCLUSIONS

There are still many obstacles to measuring the shape and size of the informality in border towns along infrastructural transport networks. It is seen as an adaptation of the formal one. Due to its non-rigid structure, the fluidity of informality allows moving back and forth within the formal constraints, and reclaims marginal positions in motion. Informal shopping catapults instant urbanism, especially in main arteries and transport routes. Informalized urbanism in American border cities nourishes the process of metapolization and future planning of transurban border environments. Informality breaks the paradigms of conventional urban planning by vindicating transgressive spatial solutions and social emancipation in frictional places by *empowering*

marginal spaces that can be converted into places for social interplay and action. The transgressivity of informal commerce and housing in border towns is categorized by:

- Elasticity (adaptation to unexpected dislocations or insertions alongside the corridor)
- Latent vs. Active (intermittent or continuous activation)
- Transformative (changes in the formal social layer)
- Resistance (disruption of the infrastructural support)

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THE RIGHT TO COMMEMORATE AND THE ROLE OF LANDSCAPE ARCHITECTURE — CASE UTØYA IN NORWAY

**ANNEGRETH
DIETZE-SCHIRDEWAHN**
*Norwegian University of Life Sciences
(UMB), Department of Landscape Archi-
tecture and Spatial Planning, Norway
annegreth.dietze@umb.no*

Annegreth Dietze-Schirdewahn (1973)
is a researcher and associate professor
at the University of Life Sciences in
Ås. She received a Dipl.-Ing. degree
in landscape architecture from the
University of Hannover, Germany
and an MA in Arts degree from the
University of Bristol, UK, in 1999 and
2006, respectively. She received a Dr.
Sc. degree from the University of Life
Sciences in Ås, Norway, in 2006. Her
current research interests include the
role of landscape architecture in World
War II memorial sites in Norway; social,
political, and economic aspects of
garden art, and methods of listing and
managing historic gardens.

*commemoration landscapes / painful places /
landscape architecture / Utøya / Falstad*

On July 22, 2011, a massacre was committed on the island of
Utøya near Oslo, Norway, where 69 people were killed and
110 people physically injured (July 22 Commission Report,
2012). The island is situated in the Tyrifjorden lake about
forty kilometers driving distance northwest of the Oslo city
center. The youth wing of the Labor Party (AUF) held annu-
al summer camps here. On July 22, 564 people from all over
Norway attended the camp. The people who died were from
eighteen of Norway's nineteen counties, and from Georgia.
Different migrant groups within Norway were also affected.
Young people in particular were murdered and injured. It
was the deadliest attack in Norway since World War II. One
in four Norwegians was personally acquainted with some-
one who had been affected by the attack (Klassekampen 2011).
Landscape architects examine the typical characteristics
and potential of a site. The general objective is to resolve
problems and improve the place. They are trained to devel-
op a landscape by responding to given physical and cultural
traits. However, is it possible to "improve" a landscape that
is laden with horror and pain? How should landscape archi-
tects deal with such traumatic places?

FIGURE 1 Silhouette of "new Utøya" seen from the mainland.
MIR AS/Fantastic Norway

The objective of this article is to discuss the role of landscape architecture in commemoration and remembrance. The ongoing process of "restoring" the island Utøya in Norway after the occurrence of July 22, 2011, is the basis for this work. AUF, the Labor Youth Party, engaged an architecture practice that presented the first part of this project to the media in September 2012 (Fantastic Norway 2012) [**FIGURE 1 + 2**]. The title of the project, "Fantastic project Utøya," demonstrates a fundamental belief that new design has the capacity to overcome the daunting emotions associated with this place. By addressing the site in a new manner, rather than as a traditional commemoration site, the architect and AUF wish to create a "new Utøya narrative," so that people will eventually associate the island with new imagery and fantastic experiences (Fantastic Norway 2013). However, protection of such sites and the ability to access their history, rather than avoiding their traumatic narrative, represents one dimension of the right to commemorate. It raises the question of who is entitled to this commemoration landscape?

HISTORICAL COMPARATIVE APPROACH—
LEARNING FROM THE PAST

The case of Utøya may gain through a reflection on earlier commemoration processes in Norway, how remains of former prison camps after World War II were handled, and how commemoration starts and involves individual and collective engagement as expressed in projects (Young 1993, 2). Historical comparative approaches give indications of a potential direction. Looking back at history is one way to learn and understand earlier processes and the options of the designer within these processes.

During World War II, Norway was strategically significant, which led to establishment of 500 prison camps throughout the whole country between 1941 and 1945. Approximately 44,000 Norwegians and more than 100,000 people from Eastern European countries were imprisoned. Many of them died, either from executions or as a consequence of systematic maltreatment, exhaustion, starvation, and disease (Reitan 2011, 183). The commemoration process started as early as May 1945 with individual engagements of survivors. At the same time, local municipalities and communities enforced a "material and mental erosion of prison camps in Norway" (Reitan 2011, 187). Watch towers and barbed wire fences were demolished and camp barracks burned. The collective engagement changed fast to a focus on a political level, a statement against fascism, and how the different nations overcame occupation and repression. Symbolism and ideologies dominated the scene. The former prison camp landscapes ended up in the "shadow lands of the Norwegian historical culture" (Reitan 2011, 187) [**FIGURE 3 + 4**].

FIGURE 2 Planned "town square" on the very top of the island.
MIR AS/Fantastic Norway

Only a few former prison camp landscapes were preserved for commemoration. Botn, circa ninety kilometers east of Bodø, for instance, was transformed to a burial ground for war graves. However, during the nineteen-fifties all prison camps were demolished. Since the nineteen-nineties the state financed the construction of memorial sites and museums located on the authentic grounds. Falstad Centre seventy kilometers north of Trondheim opened in 2006. Remembrance combined with education and research and the focus on human rights (and not only on the Nazi terror and relics) are core activities (Reitan 2011,180).

Now that most survivors of former prison camps have passed away, the landscapes have become more important as evidence. Ongoing projects like the reconstruction of the Falstad landscape show that contemporary archeology plays a major role in commemoration. For establishing of commemoration landscapes "the material presence of the past" is crucial (Domanska 2006).

FROM PAINFUL PLACES TO COMMEMORATION LANDSCAPES

Landscape, both real and imagined, is dynamic. Painful landscapes represent a negative moment in the time that is archived in landscape. Inscribed painful memories "threaten the very nature of what it is to be human" (Davis and Bowring 2011, 211). Hiding the place and its history is one approach, developing the place for dark tourism is another approach (Richter 2005, 266), evolving into a political statement (Bodnar 1992, 13) is a third option. The contradiction between active development (and improvement) of the place and conservation is obvious. How can this be resolved?

The expression of painful landscapes confronts us with the tragic event; the commemoration site allows us to heal,

and leads from a painful moment to historical experiences, humanity and hope. It initiates discussions about human dignity, human rights, and the core values of civilization (Dietze-Schirdewahn and Bettum 2011, 195). We need to understand how commemoration starts and how it involves individual and collective engagement over time.

The painful landscape of Utøya is today undergoing the same processes as the former prison camp landscapes. In a first step the decision-makers, mainly a project board of AUF and two architects, considered a rapid and total renewal as the best solution. The project is justified by the interpretation that July 22 in Norway affected the basic political values of the Labor Party (Stoltenberg 2013). Due to the very political nature of these landscapes, they are vulnerable to manipulation (Davis and Bowring 2011, 222).

Commemoration landscapes of tragic events call the attention to different stakeholders. If one group or collective acts predominantly, it will reduce the accessibility options and the rights to the commemoration landscape. AUF has the property rights to Utøya. However, through the occurrence of July 22, many individuals and groups feel some kind of "ownership" of the landscape where their beloved were killed or injured. A recent research report shows that about three of five million Norwegians participated in different forms of commemoration ceremonies, either official memorial services or at flower marches all over the country. However, the strong use of symbolism and lack of authenticity made many people feel a kind of social exclusion in the official commemoration ceremonies (Grønstad 2013, 53).

It can be difficult to take into consideration all the different needs in a traditional commemoration landscape. However, the island is already a place of commemoration. The landscape with all authentic remains in the form of little

FIGURE 3 Prison camp Falstad in 1945.
Falstadsenteret
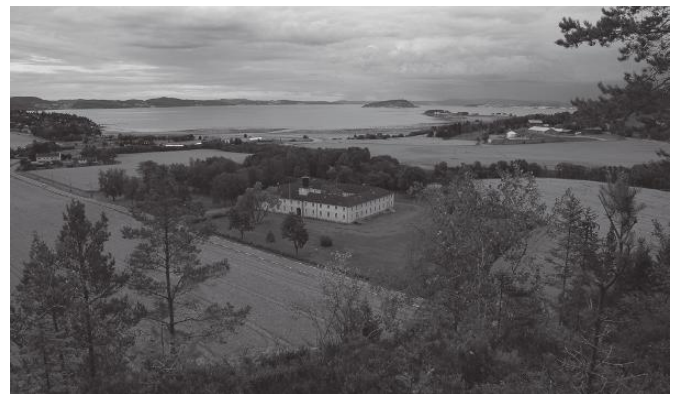
FIGURE 4 Former prison camp landscape today.
Falstadsenteret

buildings, particularly the former café, pump station, and paths embedded in the islands' vegetation, represent the people's narrative of Utøya. As a consequence, existing landscape, buildings, and vegetation have the potential to move the attention to timeless commemoration (Hunt 2001, 20). Experiences from the former prison camp landscapes illustrate that concealing the site or strong symbolism can lead to misunderstanding and confusion. Commemoration landscapes include different narratives, sometimes from different historical layers. Can rapid destruction of authentic artifacts related to commemoration be a good solution at all? The designer or landscape architect of such sites is called to understand the importance of time and his/her role in mediation between different narratives and time layers.

The ongoing process of Utøya shows that landscape architecture has to be understood as a moderator of design processes where historical, social, natural, and political values meet landscape. The task is to find virtually timeless approaches including different narratives. Historical comparative studies show that especially original authentic elements of landscape are crucial for next generations of remembrance. Consequently, a new tangible design or a total renewal is not always the best solution.

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LANDSCAPE, DEMOCRACY, AND THE RIGHT TO LANDSCAPE

SHELLEY EGOZ

Norwegian University of Life Sciences (UMB), Department of Landscape Architecture and Spatial Planning, Norway
shelley.egoz@umb.no

Shelley Egoz is a designer, landscape architect, educator, and researcher. Her research interests and output relate to the symbolic and ideological power of landscape, in particular, associated with social justice, democracy, and ethics associated with landscape, space, and design. She is the driver of the Right to Landscape (RtL) initiative at the Cambridge Centre for Landscape and People (CCLP) and the principal editor of the first book on landscape and human rights titled *The Right to Landscape, Contesting Landscape and Human Right* published by Ashgate Publications, UK, in December 2011.

landscape and human rights / social justice / democracy / wellbeing

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This presentation discusses recently introduced international discourses on landscape and human rights: "the right to landscape" (Egoz et al. 2011). The right to landscape is about the confluence of landscape and human rights and, at the same time, resonates with the underlying principles of the European Landscape Convention (ELC), a key policy document that faces many challenges but also presents opportunities for those directly involved with the planning and design of the landscape. The core values include democratic and socially inclusive decision making processes such as participation of all stakeholders and bottom-up approaches.

Landscape is a multifaceted and elastic concept open to various interpretations. Its potency to contribute to democracy, social justice, and well-being stems from the interpretation of landscape as the relationship between humans and their physical surroundings rather than a material product alone. Theoretical developments, analyses, and creative solutions that contribute to the promotion of social well-being are underpinned by ethics of humanism, democracy, and an understanding of landscape as the overlapping of intangible and material factors, similar to the way in which human rights

are framed. The right to landscape framework offers the means for critical thinking in addressing twenty-first century heightened threats to landscape and their impact on human beings.

PROFESSIONAL ETHOS

As part of the sustainability ethos that is at the heart of the discipline of landscape architecture, the theoretical foundations of the right to landscape as well as the Landscape Convention have an instrumental role in today's design education. Planning and design are always addressed within social values. Design professions, which rely on creative and visionary thinking, need to critically address present and future environmental and societal challenges, and to that end the acknowledgement of the centrality of landscape and an on-going occupation with social and political issues related to landscape are pertinent.

The discipline of landscape architecture relies on a wide knowledge base. From physical site analysis through to an understanding of ecology, infrastructure, and the social, cultural, and economic dynamics that underpin the decision making processes in landscape planning and design. Nonetheless, any decision making is not only based on "objective" analysis but also entails an evaluation and setting of priorities. This evaluation means we ascribe "values." These values are driven by our world views and perceptions. The legacies of nineteenth-century North American "father of landscape architecture," Fredrick Law Olmsted and twentieth-century Ian McHarg's "design with nature" have influenced the professional ethos. One example is that "sustainability," a popular and widely used term today that has diffused into the political arena and is associated with positive, responsible, and moral values, is in effect partially at the core of landscape architecture. I argue, therefore, that the use of the term "sustainable landscape design" in landscape architecture is a tautology, as sustainability cannot be understood to be a separate option, it is an imperative of our discipline's legacy; it has been historically, and continues to be today, part of the landscape architecture ethos (Howett 1998). Another significant legacy is the commitment to social wellbeing. The design of public parks emerged along the nineteenth-century social reforms in Europe and North America. Ideas that support democracy through space are not new—the ancient Greek agora, the market place, for example, is the tangible spatial manifestation of democracy. Similar values of humanism, social justice, and democracy are also at the heart of this century's seminal document regarding landscape—the European Landscape Convention (ELC). The ELC, by highlighting the importance of landscape, embodies this spirit of humanism that underpins landscape planning and design. If landscape, through the ELC, becomes a mainstream political concern (Olwig and Mitchell 2009) it means that the socio-political role of landscape architecture becomes instrumental. The ELC foresees the need for what political philosopher Michael Sandel promulgated as "the new politics of common good," politics that foster deeper moral and spiritual values in our public life (Sandel 2009). For Sandel, who is an economist, it is about moral limits to markets and the recognition that there are some things that money can't buy while other things money perhaps can buy but shouldn't, for example, environmental protection. Instead, the need to cultivate a new environmental and social ethic arises in the context of decisions on global action on climate change. Sandel also maintains that the building of a common life of shared citizenship relies on many public institutions, such as public transport, public libraries, and public parks, which are the sites for the cultivation of common citizenship. Places where, in Sandel's words, "people from different walks of life encounter one another and so acquire enough of a sense of a shared life that we can meaningfully think of one another as citizens in a common venture" (Ibid.). Landscape is "common good" and it is landscape architects who create these settings for community to thrive in. This is where our professional ethos is linked to an overarching multidisciplinary humanistic world view.

THE RIGHT TO LANDSCAPE CONCEPT

The theory we build upon to enrich our knowledge in landscape architecture is multidisciplinary and is derived from the hard sciences and social sciences equally. In the social sciences the term landscape has proven difficult to define (Williams 1973; Meinig 1976) and the variety of readings and uses of landscape attest to the elusive nature of this

idiom. Nevertheless, in the past few decades the use of landscape as a theoretical instrument has become common in a multitude of disciplines and "has created the basis for a 'reflexive' conceptualization of landscape" (Olwig 2000, 133). Landscape as the foci or envelope for theory and application can thus be found from cultural geography to ecology and in a diversity of humanistic fields such as anthropology, environmental, cultural and visual studies, history, tourism, archaeology, heritage, and the design professions, especially landscape architecture. Paradoxically, the vagueness and difficulty on an agreed definition has not become a limitation but offers opportunities for innovative thinking by adopting the expansive, complex framework of landscape. It is precisely this elasticity that makes landscape a potent term to explore new theories that relate to the value of landscape. By extending the spatial social arena to embrace political ethics, the occupation with the right to landscape explores ways in which landscape could become a positive tool to promote social justice.

The ELC represents a significant development in regards to values perhaps best captured in its definition of landscape as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (ELC 2000, Article 1a). Positioning the role of human perception is the critical dimension here (Olwig 2011). Moving the realm of landscape from a scientific objective arena to one that is in flux is an acknowledgement of the complicated nature of the concept and inevitably raises questions of potential ideological tensions and an association between landscape protection and matters of social justice. The ELC is a Council of Europe (CoE) document, so its moral imperative is no coincidence when keeping in mind the time when the CoE was established, post-World War II and the organization's primary concerns with maintaining democracy and human rights. Human rights discourse has widely diffused, in particular, within the last few decades of globalization where these matters have reached the developing world (Cowan et al. 2001). Today, the accelerated pressure and competition on limited resources that is bound to inflict further conflict, necessitates a new way of framing human rights. The potential of landscape in progressing human rights lies in its conceptualization as the integration of tangible spatial-physical elements and resources and intangible socio-economic and cultural values. Landscape therefore contextualizes the universal by anchoring the concept of human rights in spatial and socio-cultural specificities, thus serving as an inclusive framework for negotiating the rights of local communities and the marginalized just as it serves as a medium for securing physical and spiritual well-being.

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RETHINKING LANDSCAPE. RETHINKING VALUE.

BERNARD TREVOR GRAFTON
University of Manitoba, Canada
trevorgrafton@gmail.com

Bernard Trevor Grafton has completed his Bachelor of Environmental Design at the University of Manitoba and is currently pursuing a Masters of Landscape Architecture there as well. Grafton is also taking a diploma in urban land economics through the University of British Columbia. His research interests in landscape architecture revolve around the relationship of economics and politics within the discipline of landscape architecture and the processes encompassed within landscape.

idle no more / landscape / value / ownership / processes

WHO OWNS THE LANDSCAPE? NOBODY.

"There is a property in the horizon which no man has but he whose eye can integrate all the parts, that is, the poet. This is the best part of all these men's farms, yet to this, their land-deeds give them no title" (Emerson 1836).

The landscape is complex; a collective of networks, interrelated structures, and processes, which coalesce "to be of one simple logic" (Smets 2013).

Landscapes must be construed as the meticulously curated organizational network, responsible for founding dynamic interactions and interrelations amongst people, animals, physical constructs, and conceptual processes.

The first peoples of Canada have believed for centuries that they belong to the landscape. It is inherent in their identity, their culture, their language, and their history. Many believe themselves to be extensions of it, with several leaders suggesting landscape is their dictionary, their life, and their passion (Anon. 2013/01/29). To many of the indigenous people, landscape offers values that transcend society and time.

When settlers arrived in Canada nearly 500 years ago, they did not fathom the landscape to hold the same intrinsic

value. They only saw that which God ordained man to claim ownership of.

During the time of settlement, fences, deeds, and markers were set into the ground and title became absolute, beyond society and time. On this new frontier, the human psyche flourished like a child, pointing to all of the material items within its reach. God no longer owned the land, man did. It wasn't long before the old world "ours" became the new world "mine" (Fleet 2012).

These distinctly different ideologies on land and landscape have caused ongoing contentious issues in the relationship between the indigenous people and the Canadian government.

BILL C-45 AND IDLE NO MORE.
The Canadian government creates legislation through the form of statutes, referred to as acts. The recently passed Jobs and Growth Act of 2012, was created in large part to amend the Canadian budget, create jobs, and increase economic revenues. Informally known as Bill C-45, the Act generated considerable controversy over the length and breadth of the unrelated provisions contained within.

One major opposition to Bill C-45 was a grassroots movement known as Idle No More. It originated as a protest to three environmental provisions buried within the sixty-four-Provision act. Despite revolving around land, these provisions seem to disregard non-economic value systems. Idle No More was a brief stand in an ongoing contentious battle for land rights that shed considerable light on three provisions that may have otherwise gone unnoticed.

First, the Indian Act was amended to streamline economic development processes on treaty and reserve lands. It has been challenged due to the disregard of environmental and other inherent values of indigenous people.

Second, the Navigable Waters Protection Act protects the navigation rights and the waters that enable it, while providing the core to the federal role in environmental governance across Canada. The amendment to this provision effectively reduces the protection of Canadian waters by 99.9 %. It reduces our lakes from 32,000 to 97 and our rivers from 2.25 million to portions of only 62. These dangerous deregulations of Canadian waterways give industrial development and large infrastructure projects free rein to "disrupt and impact

Canadian waterways without regard to either navigation or environmental rights" (Ecojustice October 2012).

Third, the Canadian Environmental Assessment Act (CEAA) exists to promote sustainable development across Canada while preventing environmental degradation. Environmental assessment carefully considers long-term environmental consequences of development proposals before deciding how to proceed. CEAA is meant to link specific project impacts to the legal requirements under other federal laws aimed at protecting fisheries, species at risk, migratory birds, Canada's national parks, and the protection of indigenous peoples' rights. Certain projects have environmental damage costs that exceed their economic gains. CEAA prevented these projects from commencing. Bill C-45 repeals the CEAA altogether, which allows projects to commence despite unknown environmental damages or the costs associated.

The Canadian economy will undoubtedly grow due to this Act being passed. However, Bill C-45 seems to have disregarded other inherent values of the landscape. With the rapid accumulation of wealth preceding the importance of sustainable relationships with the environment, quality of landscape, and existing meaning of place, it has left the landscape vulnerable to exploitation by large-scale development and infrastructure projects. It is unclear what the long-term effects will be. The goal of Idle No More was to stop "the [Canadian] Government from passing more legislation that further erodes … the rights of all Canadians" (Anon. 2013/01/05). It called on all people to "join in a revolution which honors and fulfils indigenous sovereignty [and] protects the land and water" (Ibid.). Alas, the movement fell apart prior to gaining any significant ground.

RETHINKING VALUES.
An old Cree proverb says that, only when the last tree is cut, the last fish is caught, and the last river is polluted; when to breathe the air is sickening, will you realize, that you can't eat money.

Canada is affluent with land. Our depletion economy has left us blind to the effects of our actions. Scarcity of land will lead to awareness, but we cannot await the manifestation of our landscape's demise. We need to begin seeing the landscape for the land and start viewing the landscape

in terms of its inherent, bionomic, and aesthetic values as opposed to the monetary values of land. Decisions on policy are largely dependant on GDP. In order for any shift to occur, other value systems must be quantifiably compared to the GDP. While the "idea of ecosystem services is steadily gaining scientific and economic traction" they are not yet "adequately quantified in terms comparable with economic services … [and] often given little weight in policy decisions" (Costanza 2012).

Despite all human actions being "based on the same value systems … [the actors and the context] determine the situational limitations" (Buchecker, Kianicka, and Junker 2007, 9). Although "members of [certain] interest groups appear to be mainly oriented towards collective interests … the wider public [continues to be] more concerned about their [own] personal needs" (Buchecker et al. 2007, 18). If we can figure a way to include other values to the overall value system assigned to landscape, "visions of landscape developments that are conducive to social well-being [and earth's sustainability] may be established" (Buchecker et al. 2007, 8).

US Senator Robert Kennedy spoke about our society's value system in 1968: "For far too long we seem to have surrendered personal excellence and community value in the mere accumulation of material things … the GDP measures everything in short, except that which makes life worthwhile" (Batker, and De Graaf 2012).

When other values are held with the same importance as the GDP, landscape will return to "hold central significance" (Corner 2006, 26) and begin to manifest as the main anchor in development. It is our privileged responsibility as landscape architects to bring the landscape back to prominent importance within development. Through thinking of landscape as its inherent coalescent processes, the value of the landscape will be revealed, as it will contextually anchor everything around it. Anchoring development with landscape will enable people to return to thinking of the world as ours and allow people to once again coalesce with the landscape. I have begun to see a shift in the thinking by small populations in Winnipeg. Assiniboine Landing and Sage Creek are two residential developments, which bring the landscape across individual properties through the use of registered caveats and variances. This allows the developer to install

or require the homeowners to install native vegetation on their property. The homeowners have bought into this idea. The Canadian Prairie ecosystem is being restored within the residential developments. Native grasses span front yards while other native species create living fences. Greenway systems move through the developments and wetlands serve as retention ponds. The homeowners sustain the diverse habitat of the prairie ecosystem. The challenge remains to set in motion this idea to larger segments of the population and continue to increase the importance stressed on the bionomics and ecosystem services. The landscape requires a return to thinking of the world as ours instead of mine, not as ownership, but rather as a part of an overall coalescent process.

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WHO OWNS THE LANDSCAPE?
COMMUNAL LANDSCAPES AT RISK

COMMENT BY ELKE KRASNY, VIENNA

The presentations and discussions of this panel focused on the use of temporary spaces in London, on new governmental strategies of establishing community gardens in times of crisis in Portugal, and on the privatization of, and the ruinous effects on, the well-planned and composed, seemingly natural landscape of the

ELKE KRASNY

is a senior lecturer at the Academy of Fine Arts Vienna. Visiting professor at the Academy of Fine Arts Nuernberg 2013, visiting professor at the Vienna University of Technology 2014. Her curatorial work is issue-specific, reserach-based and collaborative. It addresses architecture, urban transformation, landscape, feminist epistemology and historiography and critical spatial practices.

Kibbutz in Israel. I would like to expand on our presentations and discussions with some general reflections on the title. "Communal Landscape at Risk" evokes both a profoundly troubling sense of urgency and an immediate desire for agency. Communality, landscape, and risk are suggested as being complexly interrelated. The very interdependence of communality and landscape puts both at risk. However, landscape and communality are not only at risk, but their mutual interdependence far increases this risk factor. This leads us to understand that we need to delve deeply into theory and broaden our practice, in order to understand the true conse-

quences of assessing the scale of communal landscape in a different way. Trans-corporeality and realigning the body with the material world posits a first point of departure into an understanding of communal landscape. Political struggles to guarantee access to and the protection of landscape, as well as measures to fight against enclosures within landscape and for its redistribution, posits a second point of entry into the discussion of communal landscape. Large-scale retrofitting of existing urban and rural landscapes plus the new frontiers of the massive extraction of resources point to the risks.

In her 2010 book *Bodily Natures: Science, Environment, and the Material Self,* Stacy Alaimo argues for a position of trans-corporeality to be of importance for both environmental theory and political movements. She argues that, "if nature is to matter, we need more potent, more complex understanding of materiality" (Alaimo 2). Putting landscapes at risk will ultimately mean putting communities at risk, and vice versa. Only if we radicalize our concept, that all landscape by extension is essentially communal, might we begin to understand what in fact is at stake when we speak of endangered communal landscape.

Seen from this vantage point, communal landscape is not the manageable or perhaps negligible exception of non-communal landscape, that is, private or public land ownership, but is much more the meta-theoretical and meta-practical level that encompasses all scales and relations of communality with its landscapes.

In the "Second Nature Seminar" at the Institute of Contemporary Arts in London in 1984, Colin Ward asserts that the land "belongs to the people" (Ward 1984, 44). "Like just about every culture in the world, from the American Indians to the Patagonians or the Australian Aborigines, we have a great creative legend on the

underside of our history that the land belongs to the people and that every family has its right to the livelihood they can gain from their portion of it" (Ward 1984, 44). The political struggles for landownership and the right to communal landscapes range from Zimbabwe's struggles over communal farms to the ecological revolution of the Zapatistas with its focus on land control. The case of Zimbabwe, which I cited, highlights the complexities of land reform, land ownership, post-colonialism, race, and redistribution. The case of the "Ejército Zapatista de Liberación Nacional" (EZLN) shows how local political struggles seeking control over land and resources are in fact tied up with global struggles of counter-globalization and anti-neoliberal social movements.

In the protests against the 2010 Olympics in Vancouver, the International Indigenous Youth Network put forward a statement proclaiming, "No Olympics on Stolen Unceded Native Land." A 2012 banner carried by protesters in Athens reads, "We have struggled hard to get access to this beach. Look after it." This time, the site is the former Ellinikon International Airport, which had been relocated in preparation for Athens hosting the 2004 Olympic Games. When the crisis hit and rumors of a sell-out to an international developer spread, citizens took to self-organization. They created a communal agricultural space to counteract the economic and cultural crisis. The latter two examples clearly show how struggles for the rights to communal landscapes and self-organization are connected to struggles against neoliberal large-scale urban development. These are often associated with major investments triggered by global events involving sports or the arts, such as Olympics or biennales.

Biocapitalism and austerity urbanism are both firmly aligned with ongoing processes of neoliberalization. They put communal landscapes at risk. I would like to return to the political dimension of a human and non-human, shared communality with landscape. While theoretical debate and public discourse focuses largely on political struggles and rights to participate in landscape, I would like to conclude with thoughts about the communality with landscape as regards vulnerability. If we believe that the relationship between communality and landscape is intrinsically vulnerable, and if we subsequently do not move to fortify or protect this relationship, then it follows suit that we understand the ethics and politics of interdependence as firmly rooted in communal landscapes, which are considered an "equality" in human and non-human relationships. "In fact, vulnerability constitutes one of the conditions of sociality and political life that cannot be contractually stipulated, and whose denial and manipulability constitutes an effort to destroy or manage an interdependent social condition of potential equality" (Butler 176).

VITAMIN "G"
A STUDY ON EGYPTIAN SUSTAINABLE LANDSCAPE
COMMUNITY PARTICIPATION

GERMIN FAROUK
EL GOHARY

Ain Shams University, Urban Planning & Design Department,
Faculty of Engineering, Egypt
germin_eigohary@yahoo.co.uk

Germin Farouk El Gohary has been teaching landscape architecture for the last ten years in the Urban Planning & Design Department at Ain Shams University, Egypt. Throughout these years she has focused most of her research on landscape's new and contemporary styles and applications. Since 2008 El Gohary has been interested in education, trying to create new ways of teaching and dealing with students in order to improve syllabus absorption. A few years ago, she experimented with teaching methods, with the aim to foster participation of students, and came up with the accidental conclusion of interactive lectures. She recently became Academic Director of Landscape Architecture Department and Manager of Landscape Private Unit in the faculty of Engineering, Ain Shams University.

greenery / urban quality / NGO / participatory / community garden

INRODUCTION

Environmental justice has to be a global law, because it is a basic human right, to live and breathe in an appropriate environment. Installing landscape components in housing settlement areas should be announced and shared by the living community themselves. This idea led to the label "Vitamin G," which is related to "greenery and gardens" that transmit positive energy to humans: enjoyment, relaxation in a healthy environment, social relationships triggered in open space areas, and good quality of life.

The study area is in Mokattam Mountain located in southeastern Cairo as shown in **FIGURE 1**. The Arabic name Mokattam, which means "cut up" in English, refers to how the low range of hills is divided into three sections: the highest segment has an affluent suburb of Cairo and the other two have slums, especially in the foot of the hill it has the Garbage City. The selected site is in the slums' area and it was settled especially for residents who lost their settlements in the October' 1992 destructive earthquake (Vervaeck 2012) **[FIGURE 3]**. They have a lot of social and economic problems there and suffer from urban poverty. This situation created much diversity among the inhabitants. It reduces
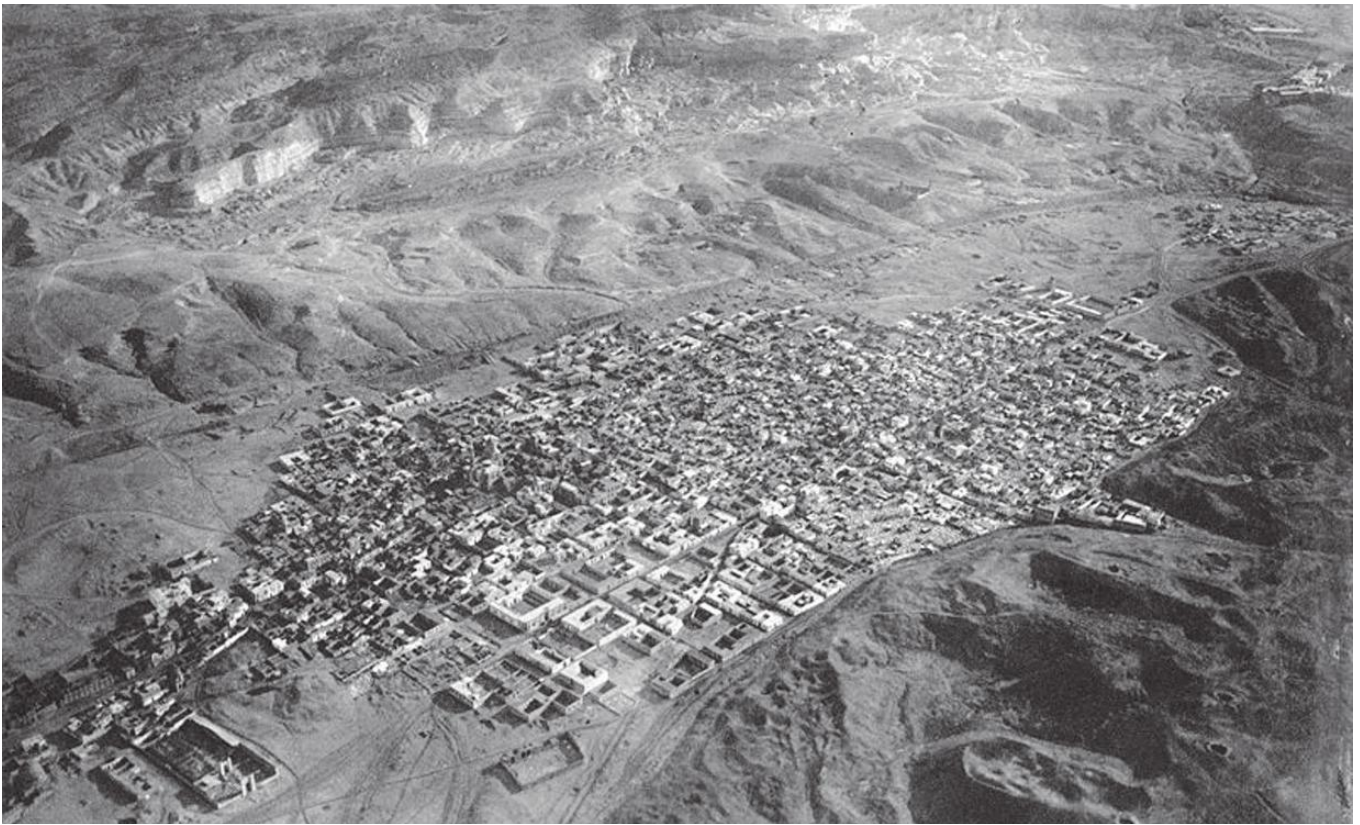
FIGURE 1 Moqattam Hills

ethnocentric attitudes and fosters out-group trust and soli-
darity, sense of belonging, and creates conflict theory (Blumer
1958; Blalock 1967; Giles and Evans 1986; Quillian 1995/
1996; Brewer and Brown 1998; Taylor 1998; Bobo 1999; Bobo
and Tuan 2006).

Community garden has a social dimension beside its green,
recreation, and urban place quality. Placemaking is the
physical appropriation of space to make it home. Social con-
nectedness is the key concept for participatory projects, it
can be a person or a group of NGO that gains from building
up social networks and getting involved in social relations
(Putnam 2000) [FIGURE 2]. Our lifetime income is power-
fully affected by the quality of our networks (Granovetter
1973/1974; Burt 1992/1997; Lin 1999/2001), as well as the
health benefits of social ties for human beings (Putnam 2007).
The main question is: which social processes and project
features will form a community garden?

Sub-questions:

1. What is the meaning of community garden?
2. Will participation create the sense of belonging to a
   place?
3. Does the project involve placemaking and social
   connectedness?
4. Will the residents accept the garden?
5. Which is more important, ownership or urban-quality?

METHODOLOGY

This paper is a case study in a project-applied study, de-
pending on a theoretical idea applied to the site as a testing
approach by using actions and reactions of applicants
(Merriam 1998).

It is divided into four main parts: first, a quick review for
pre-international community participation landscape pro-
jects; the second part illustrates the case study; the third
part is the proposed design; the fourth part is the conclusion.

INTERNATIONAL LANDSCAPE COMMUNITY
PARTICIPATION

Landscape community participation has been recently a
solution in many difficult situations. In the United States in
2005, Salina, Kansas, the Edible Estates project has turned
traditional and wasteful front lawns into vegetable gardens
and local food sources. Thirty million acers of land, lawns,
were given to people to green manicure. The idea was for
American landscaper and designer Fritz Haeg, to encourage
locals to rethink their ornamental lawns, instead of dust and
turf, they would be replaced it fruits, vegetables, and herbs
as shown in FIGURE 4 (Goldsmith 2012).

EGYPTIAN LANDSCAPE PARTICIPATORY PROJECT

In Egypt, while thinking about landscape community

FIGURE 3 The selected site in earthquake slums

FIGURE 4 The Edible Estates project in United States

FIGURE 5 Students getting along with community children

FIGURE 6 Students investigating the site

FIGURE 7 Adult's meeting
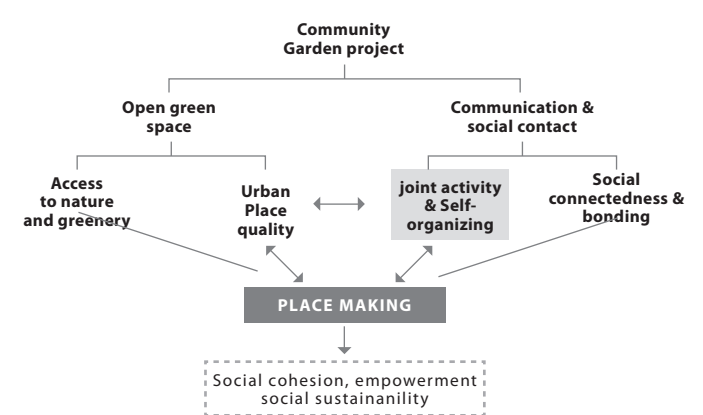
FIGURE 2 The conceptual framework (pre-empirical) of community gardens

FIGURE 8 Site analysis

participation we had to consider two scopes: culture and maintenance. The maintenance often requires the active collaboration of local communities in their planning, management, and sustainable development (Selman 2007). In this specified project the teamwork consists of;

- A non-governmental organization (NGO) Alwan and Awtar, which means colors and chords.
- Interested communities, myself as a project manager, and students of the Urban Planning and Design Department at Ain Shams University, Cairo.
- Stakeholders in the selected site and residences.
- Youth and children that are mostly the main target of the project.

ORGANIZERS' ZERO MEETING

Several design processes involved the public in meetings and workshop techniques (Lacofano 2001). The zero meeting was the first in the center of Alwan and Awtar's association in Mokattam. The seating was rounded to create a friendly ambiance. "Begin with the end in mind," says Stephen Covey in *The 7 Habits of Highly Effective People* (Heathfield 2013). So the purpose determines its focus, agenda, and participants.

First, we introduced ourselves, then the locals explained their environmental problems in the area: dust, rubbish, and unhealthy surroundings. We discussed their dreams for the place. The students started exploration of the area [**FIGURE 4 + 5**]. The focus of the discussion:

- People's main goal is to recreate clean environment on the desired block.
- They asked us to speak in simple language with locals and dress up simply too.

PUBLIC MEETINGS

After two months from the first meeting under the country's security circumstances, the community meetings were held on the site. We started by children for being impatient.

Children's meeting We gathered the children in their art class with pens and paper. We distributed sweets to get their attention, and then started talking to them. The questionnaire concentrated on their dreams of playing since that is their only aim in life, as shown in **TABLE 1**. We asked them to draw the preferred toy they would like to have under their home. They drew wonderfully. When analyzing their free time 74% spend their play time in the street [**FIGURE 11**].

Adult's meeting We focused the meeting on their relationships with their physical and social environments (Bechtel and Churchman 2013). We met people from all ages
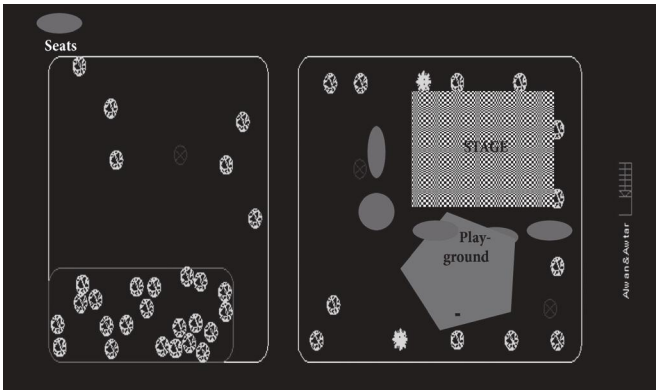
FIGURE 9 The proposed plan for the site

1	What is your name?
2	□ow old are you?
3	Do you go to school/if yes is it far?
4	Where do you play?
5	Do you have lots of friends?
6	What do you do in the summer?
7	□s there a club or a sports centre near by?
8	□f we are going to put some toys under your house what do you like us to put?
9	□an you draw it for us

TABLE 1 Children's questionnaire

1	Name
2	Age
3	Marital state
4	Occupation
5	Education
6	Number of kids if you have
7	Do you know you neighbors?
8	Do you want to get to know them better?
9	What are the main problems in the area?
10	Do you have friends?
11	Where do you meet?
12	Do you do any sports/where?
13	Do you feel that this block area belongs to you?
14	What about the whole neighborhood?
15	Do you have a garden in the area?
16	Do you go there?
17	□f you go to the garden what do you usually do there?
18	Do you have a pet?
19	Do you like the green color?
20	□f we cleaned the space between your blocks will you help?
21	Do you want us to put plants/what kind?
22	What do you want us to plant for you?
23	□f we did are you going to maintain it
24	Will you gather in this space if it is re□arranged
25	Do you have any new idea to use this place?

TABLE 2 Community questionnaire

FIGURE 6 and from the questionnaire **TABLE 2**, we found that the most free time they spend is in cafés 40% youth and 48% of adults [**FIGURE 11**]. Students made their site analysis by taking measurements for the site [**FIGURE 7**]. All suggested programs for the garden will be shown in the proposal.

PROPOSAL PROJECT

Most children and youth want a colorful theater stage. Children want slides and swings. Adults want sitting areas. Everyone wants fruit trees like mango trees, as well as rubbish bins. The result is the proposed site [**FIGURE 9**]. The project is on hold at the moment, as we wait for building permits.

CONCLUSION

Up to this point, some questions were answered while others remain open:

- Community gardens are associated with upgrading and enhancement of neighborhood quality and livability (Glover 2004).
- The sense of belonging was established at the first meeting, giving the hope of a better environment for everyone.
- They all wanted sitting areas as points of social exchange.

Sustainable solutions were suggested by students: creating toys with recycled bottles, tires, and buckets, and to inte-grate green into the area with economical and sustainable solutions.

We will be concluding the community participation landscape local project in the steps shown in **FIGURE 10**, starting from our target ending by application.

ACKNOWLEDGEMENTS

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FIGURE 10
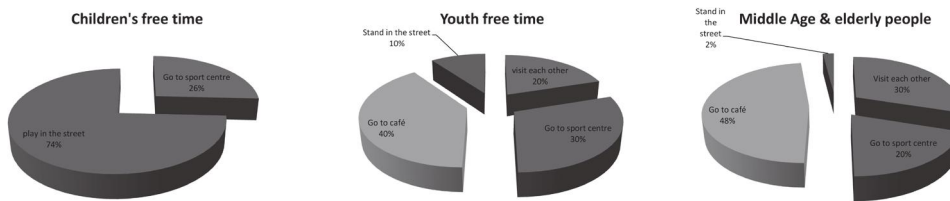
FIGURE 11 Analysis of questionnaires

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URBAN AGRICULTURE IN VILA NOVA DE GAIA: THE NURTURING SYMBIOSIS

ISABEL MARTINHO DA SILVA

University of Porto, CIBIO—Research Center in Biodiversity and Genetic Resources; Department of Geosciences, Environment and Spatial Plannings, Portugal; isabelsilva@fc.up.pt

Isabel Martinho da Silva graduated with a degree in landscape architecture from the Technical University of Lisbon, Portugal, in 1988. She has a Masters in Landscape Architecture and a PhD in Renewable Natural Resources from the University of Arizona, USA. She worked as a landscape designer and planner for several years in private practice. Since 2004, she has been an assistant professor of landscape architecture at the University of Porto, Portugal, where she teaches several courses and supervises master's and PhD students. She is also a PhD researcher at the Research Center in Biodiversity and Genetic Resources of the University of Porto. She has developed research in landscape change and sustainable design, and her current research interests are landscape change, landscape rehabilitation, sustainable design of public space, and urban agriculture.

urban agriculture / urban gardens / planning policies / land reclamation / Portugal

INTRODUCTION

Urban agriculture has been increasing exponentially in Portugal. Several factors explain this phenomenon. Urban agriculture reestablishes the lost connection of urban dwellers with the land; it contributes to healthier nutrition, namely through the adoption of organic farming, provides opportunities for inexpensive and healthful recreation, promotes social inclusion and environmental education, is therapeutic, and contributes to the household income. Due to the current economic crisis, this last factor has been gaining in importance, especially among the unemployed population.

While there are initiatives set up by private entities (companies, institutions, and groups of citizens), municipalities are the main promoters of urban gardens in Portugal, usually in response to the recreation and subsistence demands of their inhabitants. This paper presents the program launched by the Vila Nova de Gaia (Gaia) municipality to install a network of urban gardens. Without budget to acquire the county lands with greater agricultural capacity, which are mostly private, Gaia has been promoting the development of urban gardens on land that has became municipal prop-

FIGURE 1 Plots in the Quinta do Monte Grande urban garden

erty in the process of urbanization. While providing for the required urban gardens, this process makes use of land that does not have a current function and also means that the municipality does not have to pay for its upkeep.

VILA NOVA DE GAIA AND URBAN AGRICULTURE
Gaia is the most populated county in the Great Porto Metropolitan Area, and the third most populated in the country. Despite these numbers, Gaia did not initiate an urban agricultural policy until last year, with its inhabitants applying for an urban garden plot in the neighboring counties. After becoming aware of this fact, the municipality launched an innovative program: the Municipal Network of Urban Gardens (MNUG).

The MNUG is a planning strategy devised to meet the demand for urban gardens with a low or negative cost. Gaia owns a large area of municipal land. Many of these were acquired through land ceding in the process of urbanization. The Gaia Master Plan establishes that, for each household built, sixty-three square meters had to be ceded for public collective areas (road infrastructures, equipment, and green areas). Given the large area of the county and its high degree of urbanization and urban sprawl, the municipality does not have the funds to develop all of the public collective areas resulting from this process, nor to properly

maintain all its municipal lands. The installation of urban gardens in these abandoned municipal lands avoids the cost of land acquisition, transfers the costs of maintenance to gardeners, and greatly improves the environmental, visual, and social quality of the landscape.

THE MUNICIPAL NETWORK OF URBAN GARDENS PROCESS
The first step in the installation of an urban garden is the identification of the terrain. The process is usually initiated by the parishes or groups of citizens that require the municipality to construct an urban garden on a given spot.

The urban gardens are built by the municipality and managed by the parishes, or by the municipality if the parish declines. Urban gardens in social quarters are built and managed by the municipality.

The construction follows a master plan [**FIGURE 2**] and the process involves clearing and fencing the site, the supply of water, and subdivision into cultivation plots (MVNG 2013a). The plot size is established by the managing body according to its objectives and priorities. The standard plot is fifty square meters [**FIGURE 1**]. Parishes with a high demand for plots may ask for smaller plots (thirty-five to fifty square meters) to meet all its requests. Other parishes ask for larger plots (seventy square meters), to allow gardeners to
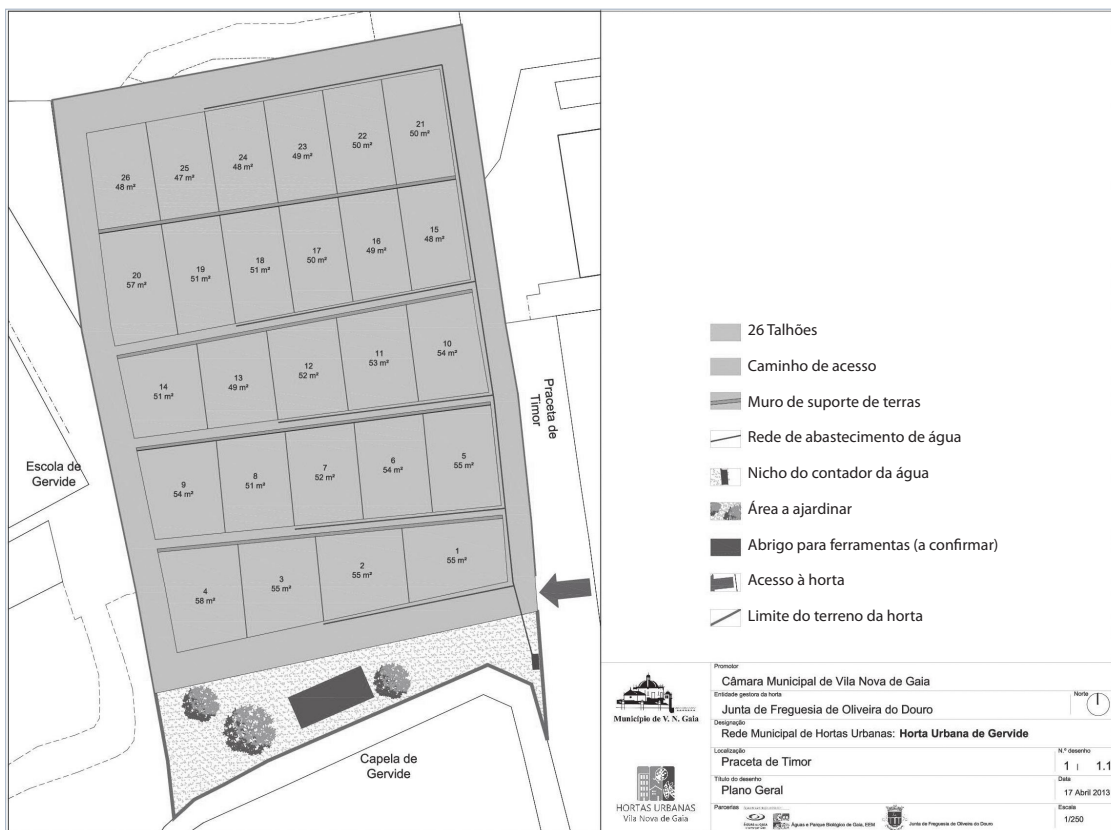
FIGURE 2 Gervide Urban Garden Master Plan

commercialize their products, if the added income assists low-income or unemployed families.

The managing entity is responsible for the distribution of plots. In gardens managed by the municipality, plots are distributed according to the application order. Parishes might follow other criteria. For instance, the Canelas parish decided to distribute plots primarily to families receiving social assistance in food. The managing entity must also provide for the water distribution and the maintenance of the urban garden common areas (MVNG 2013d).

The gardeners are the persons or entities that cultivate a plot during the established period of time, upon signing a contract and agreeing to pay three euros per month. Agreements are valid for one year and can be automatically renewed.

Any citizen that lives or works in Gaia can apply for a MNUG plot. Gardeners have to comply with a set of rules that include attending a course in sustainable farming and composting, using only sustainable agriculture practices, producing and using compost, separating and disposing solid waste in proper containers, keeping the plot clean and safe, and using the plot and common spaces in compliance with the rules (MVNG 2013c).

As of July 2013, approximately one and a half years after beginning the program, 127 plots in 5 urban gardens have been built and 198 plots in 4 urban gardens are under con-

struction (MVNG 2013b). The number of applicants in May 2013, one year after the opening of applications, totaled 640 (MVNG 2013a).

WHO OWNS THE LANDSCAPE?

Before the installation of the urban gardens, ceded terrains were property of the municipality that should have made them available to the population through the construction of equipment and green spaces. The lack of budget, however, transformed these areas into "no-places," used and thus "owned" by nobody.

The expression "non-places" describes a typology of space without a clear function. According to Bruno Marzloff (2007), non-places are places "without spirit, without character and without soul." To promote a sense of belonging and ownership, it is necessary to provide an identity to spaces. It is also essential to develop space character, as without a clearly defined function spaces are not used in their full potential (Augé 1995).

The installation of urban gardens in municipal lands meant to construct public collective areas changed the character and the "ownership" of the landscape. Land is still the property of the municipality, but the landscape is "owned" by the gardeners that work the land and by all those, who might not be actually cultivating a plot of land, but can enjoy a

FIGURE 3 Canelas Urban Garden (before)

FIGURE 4 Canelas Urban Garden (after)

FIGURE 5 Gervide Urban Garden (before)

FIGURE 6 Gervide Urban Garden (after)

FIGURE 7 Quinta do Monte Grande Urban Garden (before)

FIGURE 8 Quinta do Monte Grande Urban Garden (after)

more healthy, safe, and productive landscape. The urban gardens landscape is owned by the community overall. **FIGURE 3-8** show, respectively, the before and after of the Canelas Urban Garden, the Gervide Urban Garden, and the Quinta do Monte Grande Urban Garden.

CONCLUSIONS

Urban gardens are becoming an important part of the Portuguese urban landscapes. Until recently, most of the Portuguese urban population didn't appreciate urban gardens, as they were associated with a past of poverty, malnutrition, and social inferiority. The recognition of their importance as a healthier way of life changed this attitude, and urban agriculture has been gradually attracting urban dwellers of all social classes. This paradigm change, associated with the recent economic crisis, caused a boom in the demand for a plot of land to cultivate. To meet this demand several municipalities started to create agro-parks and urban gardens.

The installation of agro-parks and urban gardens requires space and money. Available space can be a serious constraint in compact cities like Lisbon and Porto, and money is necessary to acquire the land and build the infrastructures needed for the installation of urban gardens. Gaia, a large county, does not have a space constraint, but money is not available to acquire high agriculture capability lands to build agro-parks and/or urban gardens. To face this constraint, Gaia devised a strategy to install a network of urban gardens in municipal lands acquired during the urbanization process. This strategy, described above, can be classified as a symbiosis. On one hand, land is provided for the installation of the demanded urban gardens. On the other, urban gardens provide a function for abandoned lands, converting non-places into places owned by the local community. Additional benefits are the transference of maintenance costs from the municipality to the gardeners, the improvement of soil fertility, environmental education, community involvement, and the improvement of the environmental, visual, and social quality of the local landscape.

Devised to implement urban gardens at a low or negative cost, this innovative and symbiotic planning policy can be implemented in counties with similar conditions, either in Portugal or in other countries.

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MEANWHILE SPACES

SARAH MILLIKEN

University of Greenwich, School of Architecture, Design and Construction, England
s.milliken@greenwich.ac.uk

Sarah Milliken is a research assistant in the School of Architecture, Design and Construction at the University of Greenwich. She originally trained as an archaeologist, and has taught at various universities in the UK, Ireland, and Italy. A keen interest in environmental issues and a desire to actively address them recently led her to undertake postgraduate qualifications in landscape architecture and urban sustainability. Her current research focuses on how the economic and non-monetary evaluation of ecosystem services can be integrated into the discourse and praxis of urban planning and design. Recent publications include "Southbank Gardens" (Garden Design Journal, issue 110, 2011) and "The Value of Green Infrastructure in Urban Design" (Urban Design Journal, issue 126, 2013).

temporary urbanism / interim use / pop-up garden / vacant land / London

Vacant land is a natural phenomenon in cities characterized by a continuous cycle of development and redundancy, and there is a long tradition of temporary appropriations for legitimate community use. Historically these have tended to be bottom-up initiatives instigated by local activists, such as the William Curtis Ecological Park, which was created on the site of a decommissioned lorry park in 1977, and lasted for almost ten years until it was developed to make way for the headquarters of the Greater London Authority. Dating to the same era is Meanwhile Gardens, a community space created on canalside land in London being cleared for development. Despite the fact that permission was only granted for temporary use, the garden has been enjoyed by local residents for more than thirty years, and the site is unlikely ever to be developed.

The recent economic downturn caused many construction projects to stall, resulting in large areas of land that had been cleared for development lying vacant. UK government policy designed to regenerate city centers introduced the concept of "meanwhile leases;" originally intended to facilitate the short-term use of empty shops and other business premises, these have been subsequently extended to the temporary lease of land. This has sparked a paradigm shift

in the attitudes of owners, developers, and local authorities toward the temporary appropriation of land, with projects not only being facilitated but also initiated by them. The benefits for these bodies are clear: a reduced chance of unauthorized occupancy, the apparent fulfillment of corporate social responsibility expectations, and the possibility that the enhanced appearance of the landscape will generate a short-term source of revenue for the local economy and attract longer-term business investment.

As a result, the past five years has seen a florescence of meanwhile spaces in cities throughout the UK, particularly in London. Meanwhile spaces are explicitly and intentionally time-limited in nature. This would appear to conflict with the traditional focus of placemakers on long-term "permanent" strategies which is enshrined in the masterplanning process and which leads to a structured, prescriptive use of space. A selection of meanwhile space projects in London is used here to stimulate a brief discussion about the place of temporary urbanism in the theory and practice of contemporary landscape architecture.

100 UNION STREET

This vacant plot in Southwark has hosted three successive meanwhile spaces created as short-term installations curated by the London Festival of Architecture. Although the owner and developer has planning consent to build offices and flats, he sees intrinsic value in the temporary use of the site as a means of pioneering change in the wider neighborhood and generating urban renewal. Southwark Lido was created in 2008 by the architecture collective EXYZT. Consisting of a sun deck, paddling pool, sauna, beach huts, and bar, it hosted a variety of social activities over a five day period. Two years later the Union Street Urban Orchard was created using timber reclaimed from the Lido project. Designed by Wayward Plants, the orchard included fruit trees and other edible plants, a cinema screen, and a ping-pong table in a builder's skip. Central to the design of the orchard was a plant exchange: local people contributed hundreds of plants from their homes to create an ever-evolving garden built by the community. The garden was used to host a series of community events, and was dismantled after three months. The third installation was the Urban Physic Garden designed by Wayward Plants in 2011 [FIGURE 1]. Arranged along the lines of a conventional hospital, medicinal plants placed in "wards" for different medical disciplines were used to create an educational pop-up garden which hosted talks, workshops, film screenings, and other events. At the end of the summer the thousands of plants were distributed to community spaces in the local area.

THE PLANT ROOM

The architecture practice What if: projects has been mapping the vacant and neglected spaces that surround the housing estates of inner city London, and developing strategies to appropriate them in order to accommodate the needs of the local population. In 2008 they were commissioned by the Shoreditch Trust to create a temporary community space on a site located adjacent to a busy road which was overgrown with vegetation and attracted rubbish dumping and other anti-social behavior. The Plant Room was conceived as a room with walls created from vertically stacked plants, designed to protect the space from the noise and pollution of the traffic, and the pots were allocated to local residents for growing flowers and herbs. The garden was closed when the site was sold in 2009.

KING'S CROSS SKIP GARDENS

Skip gardens have appeared on various empty plots during the redevelopment of Kings Cross [FIGURE 2]. The temporary nature of the vacant plots encouraged the creation of growing spaces that are designed to be moved around the site as the development progresses. The garden was created in 2009 by volunteers from Global Generation, a local sustainable education charity, and Guardian News and Media, and has grown into a community project which provides opportunities for local residents and hosts school visits. The fruit and vegetables are used in "pop-up" cafés on site, as well as being sold to local cafés and restaurants.

DALSTON EASTERN CURVE GARDEN

The garden was created on the site of a disused railway line that had been derelict for over thirty years, and had become an unofficial landfill site. The potential of the site had initially aroused the Barbican Art Gallery who, in 2009, were seeking a temporary outdoor exhibition space. The success of this project, which saw 12,000 visitors during a three week period, led to a meanwhile arrangement by which the landowner

FIGURE 1 Vacant Lot (image: Sarah Milliken 2008)

FIGURE 2 The King's Cross Skip Garden
(image: Sarah Milliken 2013)

allowed the space to be used by the local community until more long-term developments are finalized. The garden, which combines structure planting with areas for growing vegetables and herbs was created the following year by landscape architects J & L Gibbons in collaboration with muf architecture/art as part of the Making Space in Dalston Project funded by the London Development Agency. Most of the garden furniture was constructed from reclaimed wood and recycled pallets. The space is tended by volunteers, and the project has delivered tangible benefits to the local community, with the creation of a design and construction apprenticeship scheme and the promotion of learning and development skills in horticulture. Despite its popularity, developers are planning to transform this award-winning garden into a thoroughfare lined with restaurants and cafes as part of a scheme for a new shopping center.

VACANT LOT

Designed to address the basic needs of food production and social space, Vacant Lot is a mobile allotment created in 2007 on a housing estate in Hoxton by What if: projects using bulk bags filled with soil [**FIGURE 1**]. Despite being commissioned as a temporary intervention for the Shoreditch Festival, the allotment continues to be used by the local community, and the success of the project led to the award of funding to create twenty food growing spaces for local residents on inner city housing estates.

DISCUSSION

Meanwhile spaces are not just about one-off initiatives in times of economic downturn; they are about embedding important principles of temporary use into placemaking. Peter Bishop and Lesley Williams (2012) argue that temporary planning should not be a different process from permanent planning, nor should it be the process before the real planning starts. Instead, it should be an integral part of an urban development, with both permanent and temporary planning merging into a new adaptive planning strategy. These case studies from London demonstrate that meanwhile spaces offer possibilities for "practices of innovation and playful intervention" (Groth and Corijn 2005, 4), and the potential for creating vibrant points of community and cultural engagement. By providing an opportunity to experiment and create immediate benefits that are at the same time contextual, responsive, flexible, and ephemeral, they present an alternative to more "permanent" public spaces which tend to be over-designed and formalized (Kamvasinou and Roberts 2013). But they can also be used to inform the design of such spaces. Matthew Carmona and Filipa Matos Wunderlich (2012) argue that public spaces that are the most adaptable and amenable to change will ultimately be the most successful. Creating adaptable spaces means avoiding filling them with fixed features that prevent them from being adapted for different functions, and avoiding over-specification in a manner that stifles adaptability. Meanwhile uses therefore provide an opportunity for testing the choreographic potential of planned permanent spaces in order to gauge how they will perform.

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THE LIFE AND (PREVENTABLE) DEATH OF THE KIBBUTZ COMMUNAL LANDSCAPE

YAEL BAR-MAOR
Yael Bar-Maor landscape architecture studio, Israel
studio@ybm.co.il

Yael Bar-Maor graduated in 2002 with honors from the Landscape Architecture program at Technion—Israel Institute of Technology. In 2008 she founded an independent studio for the design and research of open spaces called Yael Bar-Maor, landscape architecture studio. The practical work of the studio includes planning public open spaces, site development consulting, and landscape consulting for master plans of residential areas, including several kibbutzim. In 2010, Bar-Maor co-designed with Ed Wall and Mike Dring, the work "Roaming Forest" at The Biennale of Landscape Urbanism in Bat Yam, Israel.

YUVAL YASKY
Bezalel Academy of Arts and Design, Department of Architecture, Israel
yuval@keshet-yasky.com

Yuval Yasky is an architect, chair of the Department of Architecture at the Bezalel Academy of Arts and Design, and co-curator of the exhibitions "Kibbutz: Architecture Without Precedents" at the Israeli Pavilion in the 12th International Architecture Exhibition, Venice Biennale 2010, and "Kibbutz and Bauhaus: Pioneers of the Collective" at the Bauhaus Foundation, Dessau, Germany, 2011. Yasky is the founder of City/State Unit, an academic research platform that deals with issues of landscape urbanism, regional urbanism, and the integration of architecture, landscape, and infrastructure in the contemporary city.

kibbutzim / privatized kibbutz / garden city / landscape urbanism / all day garden

INTRODUCTION

Often referred to as a social experiment, the kibbutzim are voluntary collective settlements based on economic equality, communal property, and provision for the material and cultural needs of their members. This utopian form of living served, from 1910 until the end of the twentieth century, as a model of absolute sharing in all aspects of life including the physical environment. This article will follow the formal history of the kibbutzim as a distinct settlement typology that was shaped by the social practices of their members, from their early beginnings as small communal farms, to their evolution into large and growing agro-industrial complexes, until their demise at the end of the twentieth century. We conclude this article with the observation that nowadays, the kibbutzim are experiencing a possible comeback as environmentally and socially sustainable alternative for the American-style suburban subdivision, and will illustrate these new tendencies through our own work in different kibbutzim over the past few years.

FIGURE 1 Kibbutz Yagur zoning plan (above) and housing plan. The residential zone includes not only residential units but also communal functions such as the dining hall, the clinic, and the communal landscape.

FIGURE 2 The first farmyard, Kvutsat Kinneret

A DISTINCT TYPOLOGY

Undoubtedly the lack of parcelation and the undivided space are the most identifiable characteristics of the kibbutzim and the most important physical aspects that make it such a unique typology. The lack of private property has lead to the evolution of a settlement in which the space is continuous and fluid, where no division of land exists, at the same time, where everything is meticulously calculated according to the best planning practices of its time. When we look at the zoning maps of the kibbutzim, we see one color—yellow (residential area) within which the community is the sole sovereign. It may seem as if the planning and execution of the kibbutzim was an organic bottom-up development as in many agrarian societies, but this is not the case. The kibbutzim are a strange hybrid between top-down modernist planning and extremely strong communal participation. The result is a series of over 250 repetitions of the same form and acting under the same principles, but where each particular kibbutz is unique, due to differences in local traditions, ambitions, and needs [FIGURE 1].

HISTORICAL EVOLUTION

It is important to note that the distinct character of the kibbutzim was a result of a spatial evolution that was closely related to their evolving social practices. We would like to divide this evolution into three periods, each with its own spatial manifestations.

SUPERPOSITION

The beginning of collective settlement in Israel is dated around 1910, with the establishment of the first communal groups (Kvutzot) in the Jordan valley. These groups championed the ideas of small, intimate group of a limited number of people living together in a full communal life based on manual agricultural labor. The small intimate groups, with their emphasis on a closely-knit communal structure planned, their settlements accordingly—around an enclosed yard, where the social and economic spheres were superimposed one on top of the other. This imported farmyard typology dominated the planning of the kibbutzim for over a decade, until new ideas materialized and necessitated new spatial configurations (Bar Or 2010; Chyutin 2010) [FIGURE 2].

THE LARGE AND GROWING KIBBUTZ

It was not until 1921 that the first kibbutz (for the difference between the kibbutz and the kvutza see Bar Or and Yasky 2010, 188) was established. The main difference in the idea of the kibbutz was that it rejected the closed-off exclusivity of the intimate group and embraced the idea of the kibbutz
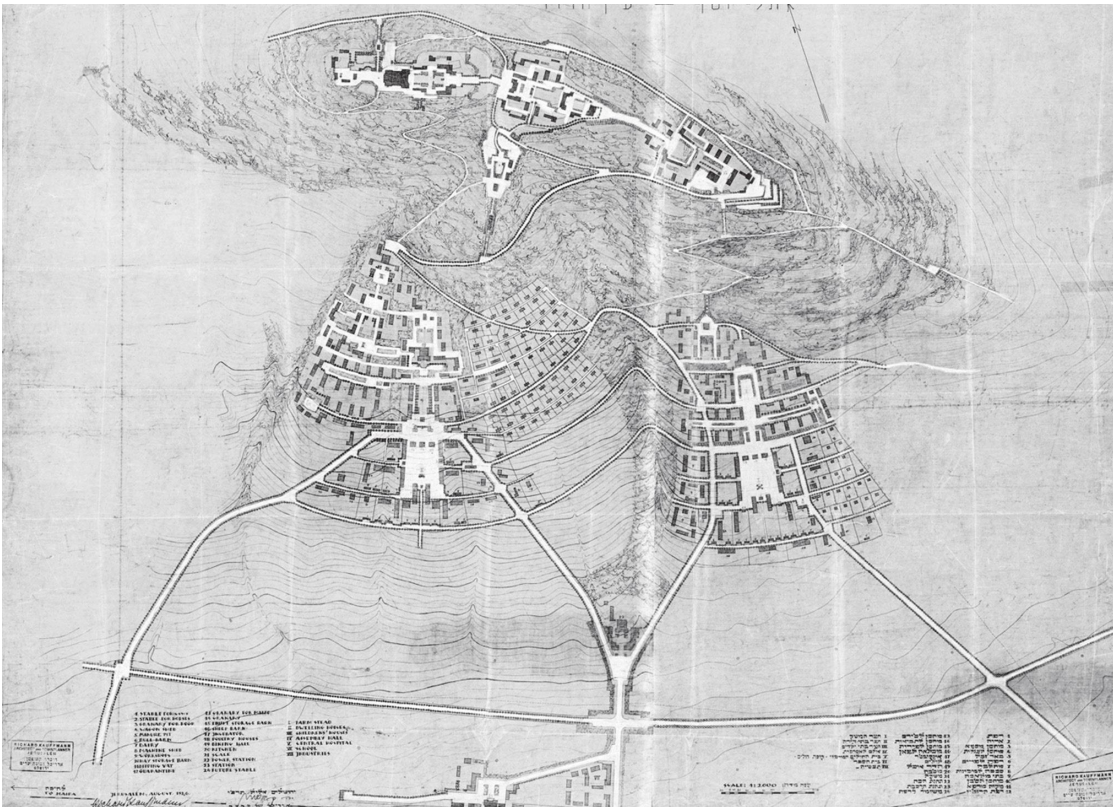
FIGURE 3 The plan of the kibbutzim Ein Harod and Tel Yosef, Richard Kauffmann, 1926

as an agro-industrial community, oriented towards the general society as an alternative to both the backwardness of the agrarian village and the capitalist exploitation of city life (Yasky 2010).

The ideas of the "large and growing kibbutz" have demanded a new type of settlement plan. It was the well-known, German-Jewish architect Richard Kauffmann, who was the first to acknowledge the urban and architectural implications of such collective life-style (Kauffmann 1940). In his 1926 plan for Ein Harod and Tel Yosef, we can already see the features that will become characteristic of the kibbutzim, mainly the separation of space into discreet elements, the hierarchy of the plan towards the center, et cetera. It is interesting to note two aspects that are still evident in this plan but will later disappear—one is the strong axial orientation of the plan, reminiscent of Kauffmann's formal German origins and his affiliation to the Garden City movement. But more importantly are the traces of land subdivision, which was eliminated altogether from the kibbutzim soon after [**FIGURE 3**].

AN ALL DAY GARDEN

The term "an all-day garden" was coined by architect Shmuel Bickels (Bickels 1960) to describe the kibbutz as it matured and crystallized over five decades of spatial evolution. This term describes the kibbutz as a unified domestic space, distributed throughout a large area and connected via an intricate network of footpaths and landscaped open communal areas. The minimal residential cells were officially called "rooms" to suggest that the kibbutz as a whole was like a "house." The rest of the domestic functions were distributed throughout the residential territory with the main rooms of this extended house, the dining hall, auxiliary social functions, located in its center [**FIGURE 4**].

This spatial configuration made the landscape the most dominant physical aspect of the kibbutz, since the internal landscape was considered an inseparable part of the domestic sphere. It is interesting to note that it wasn't like that from the beginning. The landscape as a design concept started with local initiatives to improve the quality of life in the kibbutzim: a tendency called "camp melioration" (Enis and Ben Arav 1994). It was Richard Kauffmann who started employing landscape architects to design the communal open spaces in the kibbutzim. Up to the late nineteen-forties, we can see a strong tendency towards orthogonal grid patterns with the main axis accentuated as boulevards of trees. The in-between open areas, especially surrounding the central structures, were designed as formal gardens in a very traditional way [**FIGURE 5**].

FIGURE 4 Isometric drawing of Kibbutz Ashdot Ya'acov, Shmuel Bickels, 1940s

FIGURE 5 Plantation plan of Kibbutz Gvaram, Shlomo Oren-Wienberg, 1946

Only in the late nineteen-forties, with the appearance of a new generation of landscape architects, can we begin to identify a radical shift away from the formalism of the older generation towards a new approach. The new configurations used sculptural, topographic manipulations with very subtle transitions to recreate the landscape and make the integration between the open and the built elements seem more organic. This was the product of a new sensitivity towards the local Israeli landscape conditions, to which the new generation of architects were familiar, and of a rejection of stylistic formalism in favor of a strong belief in the value of sincerity, through the use of the barest elements and minimal transitions. This soft, landscape urbanism (Yasky 2012; Efrat 2010, 123) in which the buildings were situated in the landscape as free standing "garden follies" was a much better fit to the social organization of the kibbutzim and the way the members occupied their domestic territory. Thus, it materialized and matured to become the visual and physical emblem of the kibbutzim from the nineteen-fifties on **[FIGURE 6–9].**

FROM NON-URBAN TO SUBURBAN: THE PRIVATIZED KIBBUTZ

An economic and demographic crisis starting in the mid-1980s marked the beginning of the end of this serene picture. As a result, the kibbutzim have been undergoing far-reaching changes, gradually eliminating the different aspects of communal life and introducing privatization, which changes the spatial organization dramatically. The first spatial phenomenon that came out of the privatization process is the suburban "expansion neighborhoods." These local versions of the "Levittowns" were developed adjacent to the existing kibbutzim but totally segregated socially and spatially from them. At the same time, a process called "ascription of dwellings" started in the older parts of the kibbutzim, dividing the habitat and privatizing the shared, communal residential zone, according to guidelines similar to those of the expansions, introducing vehicular traffic and suburban McMansions, which literally erased the existing fluid, undivided internal landscape of the kibbutzim (Yehuda and Bar Kama 2001) **[FIGURE 10 + 11].**

LANDSCAPE AS A WAKEUP CALL

With the introduction of private landownership, fences started rising. The qualities of the kibbutz, which came to life in its unique open landscape, are gradually disappearing. In fear of losing this landscape, many of the kibbutzim decided to halt plans of suburban developments and rethink. This is a most significant moment for architects and landscape
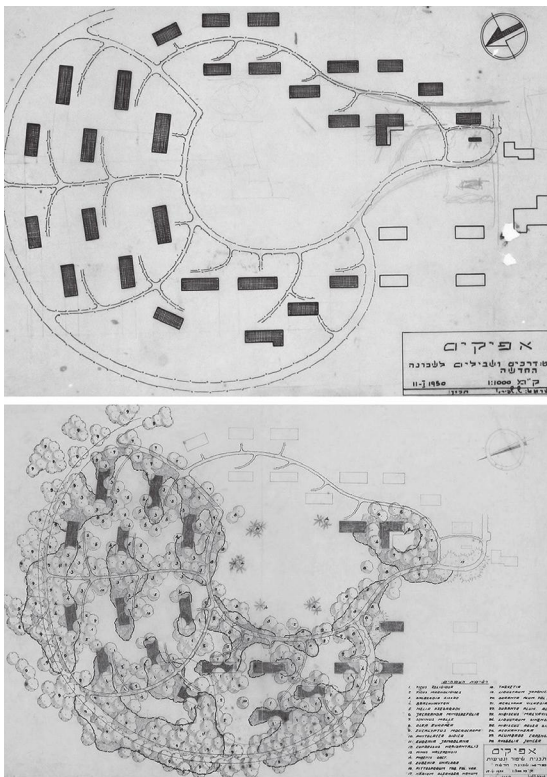
FIGURE 6 Plans of paths (above) and vegetation for housing area in Kibbutz Afikim, Lipa Yahalom, 1950
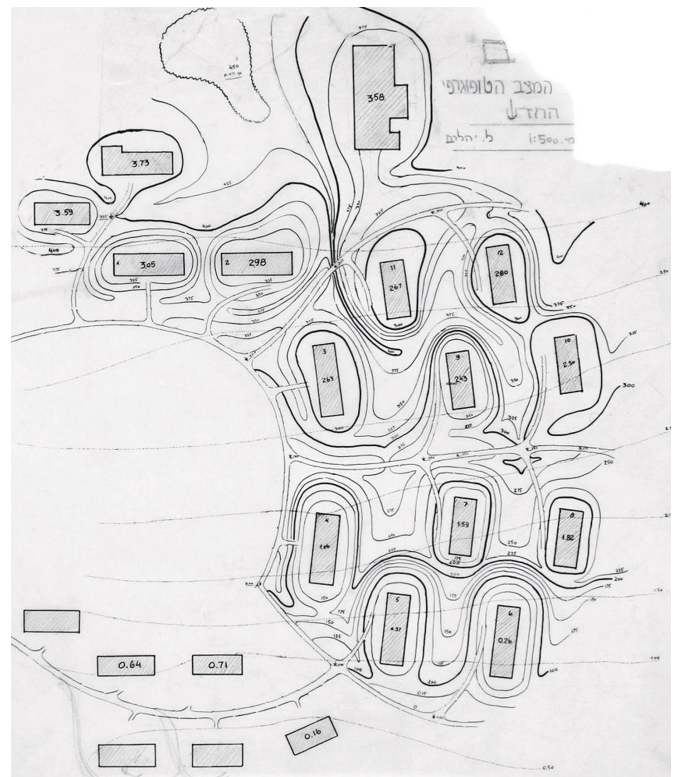
FIGURE 7 Topographical plan for housing area in Kibbutz Afikim, Lipa Yahalom, 1950

architects. This is a time to search for a third way, which preserves the basic qualities of the kibbutz space while accepting a more moderate form of privatization.

In this context we were commissioned by a few kibbutzim to consult and propose possible new ways of operation. The most mature example of such replanning is the concept for Revadim, a kibbutz in the south of Israel, which has an existing zoning plan from 2004 for a typical suburban expansion neighborhood and a subdivision of the old kibbutz. As the Kibbutz started implementing this plan, many members understood the threat it imposed on their existing quality of life. They commissioned us to devise an alternative plan that would better integrate the new expansion neighborhood with the existing fabric of the old kibbutz, and preserve its integrity and quality while allowing them to upgrade their homes. Our plan focuses on three aspects—the relationship between the private house and the surrounding communal landscape, keeping vehicular traffic as far away from the center of the residential areas as possible, including the new expansion; and the preservation and reinvigoration of the open-space system as the main spatial organizing principle.

In order to achieve our goals we are required to work at a much higher resolution then the usual, generic planning.

Stitching together the pedestrian paths and the landscape continuums demands tailor-made solutions concerning every aspect of the plan: footprint, height, setbacks, and orientation of the built mass and its relationship with the surrounding landscape, including existing vegetation, surface water drainage, and more.

It is our hope that by introducing an alternative to the generic solutions we can convince decision makers, architects, and prospect residents that the Kibbutz, despite the radical changes, still proposes a unique opportunity for sustainable residential environment, in contrast to the failing suburban model [FIGURE 12].

FIGURE 8 Housing units within the communal landscape in Kvutzat Yavne, 2012

FIGURE 9 Kibbutz Ein-Gedi is literally a botanical park in which the vegetation dominates the landscape and the buildings are hardly evident, 2010
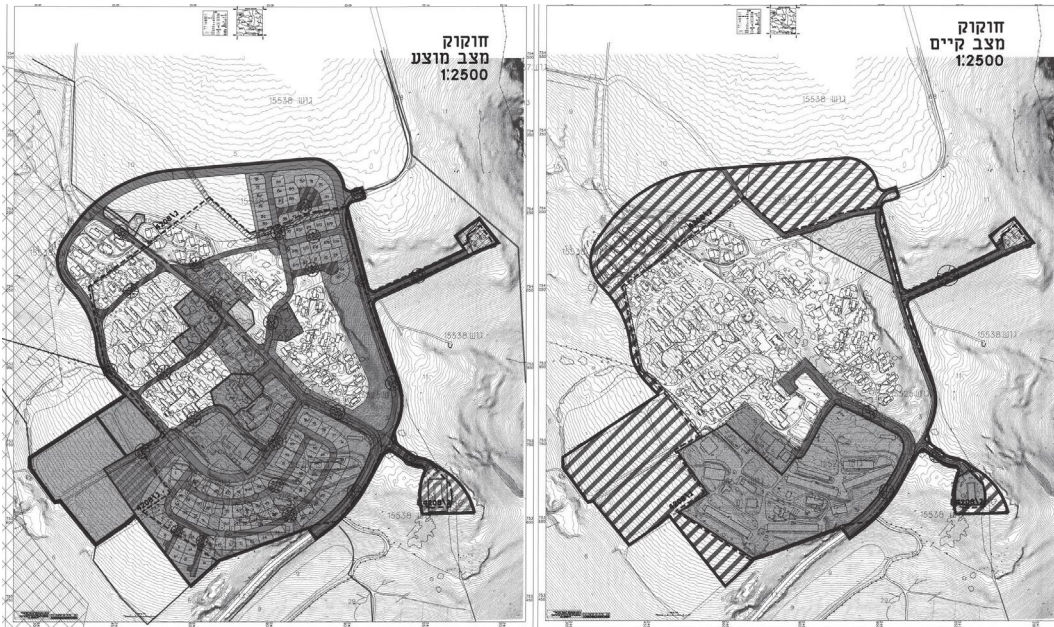
FIGURE 10 A master plan for partial privatization of Kibbutz Hukok (left), Year 2000; the "expansion" plots are colored blue and a zoning map of the kibbutz before privatization (right); the dwelling area is one, undivided parcel.

FIGURE 11 "Expansion neighborhood" in the privatized Kibbutz Maayan Zvi, 2012

FIGURE 12 Landscape and circulation plan for the renewing Kibbutz Revadim, KST-Yasky and Partners Architects and Yael Bar-Maor Landscape Architecture Studio, 2013

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FOOD TRADITIONS AND LANDSCAPES—DO THEY OWN EACH OTHER?

ROMAN J. M. LENZ
Nürtingen–Geislingen University, International Master of Landscape Planning, Germany
roman.lenz@hfwu.de

Roman J. M. Lenz studied agrobiology at the University of Hohenheim and was awarded a PhD in Landscape Ecology from Munich University of Technology. From 1996 to 2009 he served as head of the Institute of Applied Sciences, Nürtingen University. Since 2003, Lenz has been the dean of studies of the International Master of Landscape Architecture (IMLA). His research and teaching focus on agrobiodiversity and regional development.

cultural landscapes / agricultural traditions / culinary traditions / varieties of domesticated plants and animals / local knowledge

INTRODUCTION

The regions in Central Europe are characterized by a variety of agricultural landscapes, which in turn are influenced by specific traditional production methods and culinary traditions. Traditional and local knowledge associated with indigenous species and traditional food represents a valuable pool of accumulated practical knowledge and constitutes a crucial component of the culinary heritage of these regions (Wirsig et al. 2010).

There are many descriptions available and well-known to the public, like Mediterranean cuisine, typical regional food, specialties from certain areas, and so on. Everybody knows Scottish whiskey, Chianti red wine, ham from Parma—we could make a never ending list for products and food, related to geographically, more or less, distinct areas. Food "baskets" can be associated with a region, and a region can be identified with its food.

World- or European-wide intellectual property concepts, rules, and mechanisms such as Protected geographical indications (GIs) represent an option to control access to local and traditional resources and ensure the principles of

sharing the benefits of their exploitation, as promoted in the Convention on Biological Diversity. Nevertheless, due to flaws in the existing rules and legislations, protecting GIs does not completely stop the misappropriation of traditional knowledge.

On a national level, protection schemes such as the collective trademark in Germany can be used. Another non-juridical alternative is the "Ark of Taste," an international inventory of heritage foods in danger of extinction, which is maintained by the international Slow Food movement (http://www.slowfoodfoundation.com/ark). Hence, an NGO, dealing with indigenous varieties and its agricultural as well as culinary heritage, play an increasing role in a reintroduction of traditional "culture" into landscapes. By means of the following case studies for two products of the Ark of Taste, insight is given in the relationship between agricultural and culinary traditions supporting farmers' rights and their impact on the preservation of indigenous species, and traditional and local knowledge.

These two examples of collective appropriations must not only be described, but also analyzed—for example, *why* are they related to each other?—and used in landscape planning for instance, for a sustainable regional development.

CASE STUDY 1

In 2007, old and regionally extinct lentil varieties, "Alblinse 1" and "Alblinse 2," were found in gene banks and reintroduced into the area of the Swabian Jura. Today, already more than 200 hectare are being cultivated with these two previously local varieties. Increasing demand by the population plus the advantages for wildlife (weed, birds) raise the lentil-growing farmers' awareness of these regionally authentic and environmentally advantageous crop—it makes them even somewhat proud (Lenz and Mammel 2007; Lenz 2013)!

Traditionally, lentils together with "Spätzle," the Swabian name for a specific pasta—are a national Swabian dish. Although the regional cultivation of lentils has become extinct, the people continued to eat this traditional dish. This is one of the reasons, why reintroducing the cultivation of these lentils is welcomed, most people even accept the higher price associated with the improved quality. Within a few years, the market demand for the lentils from the Swabian Jura grew enormously, and one of the producer associations now harvests over one hundred tons of lentils per year.

In addition to the social aspects of culinary specialties, site conditions also play an important role. Limestone and shallow soils are perfect conditions in which to grow lentils. If soil is overly fertile and moist, the lentils would produce more green biomass, but less fruits. Hence, a stony dry piece of arable land, based on limestone, is a suitable place to produce lentils.

The reason for the extinction of the lentil production was also due to site conditions as well as societal aspects: the lentils need to be planted together with barley or another cereal, so that the lentil plants can grow up along the stalk. This mixed cultivation will then be harvested together, and the cereal fruits need to be sorted from the lentils. Also, the date of harvest will be a compromise according to the ripeness of both fruit types. Hence, the harvest can be partly unripe, which means wet, and has to be dried directly after harvesting. This is an enormous, time- and energy-consuming process, and, hence, expensive. Imports from overseas were eventually more economical and pushed regional production in Germany—after the Second World War—from the market.

Interestingly, there is another basic appropriation between landscapes and food culture: all over the world we find dishes that mix legumes and cereals—like lentils and rice (for instance in Indian cuisine), beans and maize (South

FIGURE 1

America). These mixed dishes increase the biological value of the proteins because of a more human-like set of essential amino acids. For a diet that is low in meat, this helps to avoid any deficiency of proteins—which was essential in the past for vegetarian-based cultures. For landscape this simply means: legumes plus cereal cultivation, with its specific species and varieties, is an essential set of agriculture for the survival of mankind. This can still be found today, but most of the legumes are produced as food for animals, and the biological fixation of nitrogen, via their root bacteria, is widely replaced by synthetic fertilizer.

CASE STUDY 2

On the so-called Filder, a productive area south of Stuttgart, the peak-headed cabbage has a long tradition. Today, the different varieties are disappearing, even before they are properly described and documented. Some farmers started a campaign to protect the "Filder cabbage," as a geographical indicated product by European law, and together with the support of universities and NGOs they are currently successfully collecting and preserving those varieties, and therefore their property rights (Lenz 2006; Lenz and Mammel 2007).

The basic reason for breeding Filder cabbage is the overwhelmingly good soil conditions in the Filder plain. Meter-thick layers of loess produced silty soils with a high water and cation-exchange capacity. Cabbage grows perfectly under those site conditions and, with the help of monks, the people cultivated and bred special cabbage varieties over the last centuries. Cabbage is also rich in Vitamin C and certain substances that aid digestion, and in the form of "Sauerkraut," can be kept fresh and edible over long periods of time.

Like the lentils, after the Second World War, imports of cheaper, and wider varieties of vegetables led to a strong decrease of cabbage production. Today, most of the farmers, who still produce Filder cabbage, stopped breeding their own varieties, and buy young plants from hybrids from big producers for instance, in the Netherlands. Hence, the local varieties are threatened with extinction. Yet fortunately, the people in the region are traditionally bound to the cabbage production, hold cabbage feasts, and so on. And in this way keep the tradition alive. This also helped to protect the Filder cabbage as a European-wide geographical indicated product, as mention above.

There is another aspect, showing the interdependencies of landscapes and agriculture: many of the cities started developing in agriculturally fertile areas so that they could grow their food for their own supply. Good soils in order to grow vegetables like in the area of Stuttgart or Bamberg then led to the development of specific varieties, perfectly adapted

FIGURE 2

to site conditions, but also cultivated for the specific needs of the people.

CONCLUSIONS

It can be concluded from both case studies that landscapes and their agro- and food culture are strongly interrelated and can be mutually beneficial. In addition to the basic ecological aspects, for instance the suitability of site conditions, we can also identify the aspect of "poverty": there was practically no animal protein available for ordinary people until the twentieth century, hence, lentils were an important source of protein. There is the additional aspect of "culinary developments," for instance by monks—the peak-headed Filder cabbage is more delicious. Informal bonds—like the "Ark of Taste" from Slow Food International—as well as formal bonds—like protected geographical indications— between producers and landscapes help to strengthen the regional identity and a regional sustainable development.

ACKNOWLEDGEMENTS

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LANDSCAPE, LIVABILITY AND HAPPINESS IN REGIONAL DEVELOPMENT AND LANDSCAPE PLANNING

BORIS STEMMER

Kassel University, Department for Landscape Planning/Land Use, Germany; stemmer@uni-kassel.de

Boris Stemmer holds a Dipl.-Ing. degree in landscape planning. After studies of landscape planning in Kassel in 2007, he started working as a landscape planner at Georg von Luckwald, Hameln untill he took over a position at Kassel University in 2009, where he is currently working as lecturer and research assistant. In addition, he is also an employee of Hage+Hoppenstedt Partner Rottenburg (HHP) and occasionally undertakes freelance projects in the field of landscape visualization. He participates in several research projects on European and National level. Stemmer's PhD thesis on public participation in landscape quality assessment using WebGIS and other ICT-Tools will be finished in 2014.

targeted analysis / human well-being / participation / regional development / landscape planning

INTRODUCTION

This paper presents first results gained from the ESPON Project LIVELAND that was started in January 2012 to identify means of strengthening livability of landscapes as an asset in regional development. Case examples from five different stakeholders are analyzed and a discussion process on landscape and livability has been initiated. The project is conducted in five stages of which the establishment of a Common Analytical Framework (CAF) is one of the core issues conducted by Hage+Hoppenstedt Partner and Kassel University. The purpose of the CAF is to help the transnational project group (TPG) in their effort of systematically analyzing the five case examples aiming to identify best practice in addressing aspects of livability and happiness in planning. Texts and maps stemming from research projects under the ESPON Program presented in this article do not necessarily reflect the opinion of the ESPON Monitoring Committee.

PROJECTS AIMS

In the framework of territorial cohesion principles, regional policies in EU increasingly focus on harmonious territorial
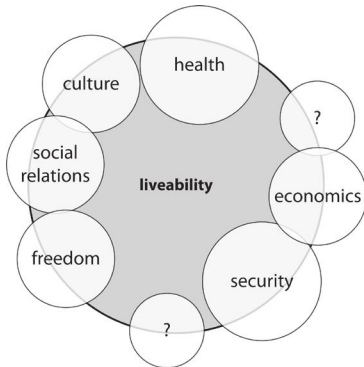
FIGURE 1 Components of Livability (© ESPON, 2013)

	Regulation Function	Production Functions	Cultural Functions
Health	high	high	middle
Security	high	low	low
Social relations	low	low	high
Culture	low	low	high
Economics	middle	high	low
Freedom	not related to landscape services, but important in planning landscapes		

TABLE 1 Landscape-livability matrix, estimation of interrelation of landscape function groups and components of livability (© ESPON, 2013)

development towards sustainability. Landscape has become a key territorial value and a potential asset in regional development thanks mainly to the European Landscape Convention (Council of Europe 2000). Thus the relation between territorial development and landscape planning focused on livability aspects is addressed in the project. LIVELAND is a targeted analysis project and is an interactive exercise among researchers and stakeholders.

ELABORATION OF THE CAF

According to the overall project aim, the development of the CAF started with research on concepts of livability and on concepts of landscape. In addition, recent scientific discourses on landscape contributions to livability were analyzed. Moreover, it was important to make use of a landscape concept that is recognized throughout the stakeholders' regions. After defining a common understanding of concepts of livability and landscape, the interrelation of both was investigated by making use of a modified landscape functions concept. A lot of research has already been conducted in the field of landscape's and nature's contribution to livability, mostly resulting in the conclusion that landscape, open green spaces, and a certain amount of natural elements in the environment lead to increased well-being and higher livability (Abraham, Sommerhalder, and Abel 2010; Finke 2009;

Körner, Nagel, and Bellin-Harder 2009; Thompson, Aspinall, and Bell 2010). Consequently, high quality landscape management and planning contributes to livability and human well-being, which again is one of the major aims of regional development. Thus, livability is a subject of policy and it is on the agenda of planning. But still it is not clear which planning practices, actions, and measures lead to increased livability throughout landscape, and how landscape as a livability asset can be addressed within regional development. A first step towards answering this question is to find out how livability can be evaluated. There are to date a number of approaches to how happiness (and livability) can be "measured": some use self-reported happiness, others would directly ask sources of satisfaction, willingness to pay (WTP), and willingness to accept (WTA) are also in use. But in most studies, methods are triangulated. Nevertheless, it is possible to group different types of (research) strategies:
- Livability rankings make use of the outcome of happiness research. They attempt to make findings operational and split them up into different factors. These are used to survey certain areas (countries and cities) and compare livability by the degree of factor fulfillment.
- Happiness surveys ask people to report on what makes them happy. These studies report on what is the source of people's happiness.
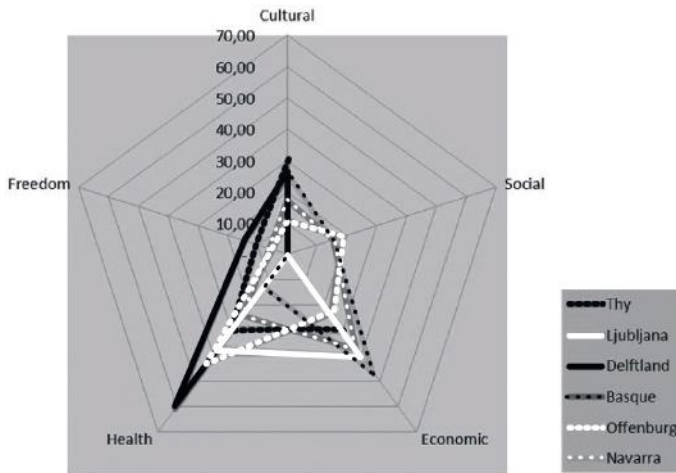
FIGURE 2 Overall distribution of functions
(by Nordregio/© ESPON, 2013)
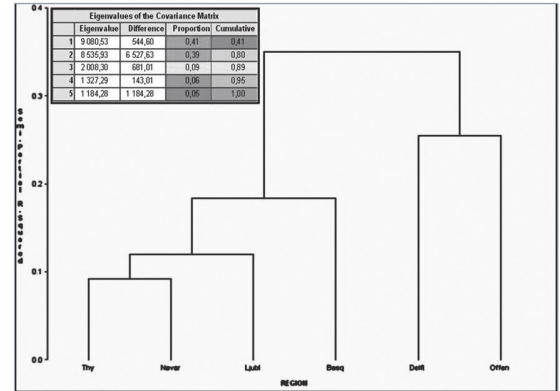
FIGURE 3 Cluster analysis dendrogram
(by Nordregio/© ESPON, 2013)

- Sectoral research: The third group starts from a hypothesis to investigate certain aspects that might influence happiness. In many instances the basis for the hypothesis appears to be utilitarian.

Livability is, in many instances, seen as closely related to quality of life. However "quality-of-life indexes" are based mainly on economic factors. Such indices only reflect part of what is important for livability. Many approaches to integrate qualitative factors into measuring of quality of life have been reported. Two major issues that exceed what some classic livability indexes offer have to be taken into account:

- Where happiness is at the basis of quality of life, any attempt to rely on objective measures need to be supplemented by parameters that reflect subjective aspects; for the purpose of LIVELAND, landscape aspects need to be considered (including what people cherish in their surroundings that contributes to their quality of life).
- Where landscape is to be considered, in relation to quality of life, assessment must attempt to include landscape as a holistic entity (as "an area as perceived by people"). Measuring quality would have to include the aspect of individual perception and this would, at least partly, be subjective in nature.

In conclusion, livability is more than what can be measured quantitatively by economic and environmental indices. Nevertheless, as a starting point by literature review it is

possible to identify a set of components that are commonly agreed on to be important for livability [**FIGURE 1**]. Landscape function concepts seem to be a constructive approach to make concepts of livability and landscape assessable. Moreover, it complies with the notion of multilevel assessment, as it is generally applicable on every planning level. A similar approach was also presented in "The Millennium Ecosystem Assessment" (Reid 2005). This project was focused on the relation of livability and ecosystem services with a slight emphasis on the "basic materials for a good life." It was developed to an approach related to multifunctional landscapes (Groot and Hein 2007) that identified three major groups of landscape functions [**TABLE 1**]. Based on this, landscape contribution to livability can be identified in six different fields: health, culture, social relations, economics, freedom, and security with freedom being especially related to planning culture and participation [**TABLE 2**]. Eventually due to a preliminary analysis of the stakeholder's plans, it turned out that the aspect of security would not result in any outcomes for all of the plans and was no longer used. Afterwards, contributions of (landscape) planning and policy making to management of livable landscapes were examined. In this context a common understanding of planning is made use of that is based upon the landscape convention as well as on other European policies employing six stages:

Component of Liveability	Questions	Explanation	Culture	
General Questions:				
General:	**Does this polidy document or plan deal with components of liveability?**	Is the component of liveablity adressed in a direct way? If it is not, all following questions are to be skipped. If not go for the light yellow questions and follow further instructions.	Y/N	
	Does this policy document or plan include a map with a thematic focus on components of liveability?	A map clearly demonstrates how a policy/plan deals with any issue of concern. Maps are quality indicators and might include assessments, visision, actions and more either in separate sheets or all in one map.	O evaluation/analysis O strategy/vision O actions/measures O other	
	Does the policy / plan provide a strategy and /or vision for components of liveability?	Having a vision and strategy for each component is considered essential for a good policy or plan.	5 step: Assign a value according to the following scale: 0=not at all; 1= to a limited degree; 2= to some degree; 3=adequately; 4=to a high degree; 5= to a very high degree	
	Are there any contradictions between different components of liveability and are such conflicts pointed out in the policy document, or are such conflicts to be expected?	5 step: Assign a value according to the following scale: 0=no; 1= for very few; 2= for some; 3=for several; 4=for most; 5= for all	5 step: Assign a value according to the following scale: 0=not at all; 1= to a limited degree; 2= to some degree; 3=adequately; 4=to a high degree; 5= to a very high degree	
			Identity	
Indicators			**Elements of Identitification** (e.g. special landscape features, buildings, species, structures)	**Landscape character** (incl.typical landacep structures, landuse systems, agriculture etc.)
	Are indicators addressed, and if yes, then in which parts of the plan are indicators used?	Each component is split into different indicators. Please mark the planning phases in which the indicator is adressed within the policy document or plan. Further down you only have to answer the questions in the color of the phases that you have marked.	O evaluation/analysis O strategy/vision O actions/measures O monitoring	O evaluation/analysis O strategy/vision O actions/measures O monitoring
1. evaluation and analysis				
	Are methods described in the policy document or plan that are employed for the assessment and evaluation of the state and development of landscapes?	5 step: Assign a value according to the following scale: 0=not at all; 1= to a limited degree; 2= to some degree; 3=adequately; 4=to a high degree; 5= to a very high degree	5 step: Assign a value according to the following scale: 0=not at all; 1= to a limited degree; 2= to some degree; 3=adequately; 4=to a high degree; 5= to a very high degree	5 step: Assign a value according to the following scale: 0=not at all; 1= to a limited degree; 2= to some degree; 3=adequately; 4=to a high degree; 5= to a very high degree
	Are the methods employed useful to assess and evaluate landscape comprehensively, and do they allow for including all of the territory? Is all of the territory assessed?	When adressing landscape in regional development a spatially inclusive approach is to be preferred because landscope is everywhere. No territory should be neglected.	O selective O spatially inclusive/ comprehensive	O selective O spatially inclusive/ comprehensive
	Do the assessment and evaluation methods employed in this policy document or plan address different aspects of landscape character?	Landscape character is most relevant to people. It includes different aspects and proveds a chance to make landscape understandable intersubjectively. Dealing with different aspects is essential. (Also refers to characteristic species, patterns of land use etc.)		O historic relevance O cultural relevance O uniqueness O public perception O others
	To what extend does the assessment and evaluation methods include macro and micro infrastructure that are relevant for touristic and leasure uses?	5 step: Assign a value according to the following scale: 0=not at all; 1= to a limited degree; 2= to some degree; 3=adequately; 4=to a high degree; 5= to a very high degree		
2. Planning processes and participation				
3 Strategy and Vision				

TABLE 2 Extract of the CAF Matrix on Culture as component of livability (© ESPON, 2013)

- Evaluation and analysis
- Strategy and vision
- Actions and measures
- Monitoring
- Planning process and participation
- Planning procedures and decisions

The structure of the CAF is based on these planning stages. Their correlation with livability components and indicators forms the structure of the CAF matrix. The matrix had to be adaptable to analyze a variety of different kinds of plans and policies. On the other hand, the CAF should deliver results that can be used to produce not only qualitative but also quantitative outputs. To meet these expectations the CAF is less focused on specific types of results but on following certain standards and practices of planning.

First attempts to apply the matrix to the stakeholders' cases led to suggestions for simplification that have been incorporated in the following steps. The final version of the CAF is a tool that the stakeholder could make use of to analyze their plans with regard to livability of landscape as an aim of planning. It consists of a matrix including the stages of planning on the one hand as well as the components of livability and related indicators on the other. Presented as a table sheet, it is easy to fill as it includes multiple choice answers mainly [**TABLE 2**].

PRELIMINARY OUTCOMES

One aim of the CAF matrix was to make it possible to normalize all answers in order to use them in quantitative analysis. By quantitative procedures, responses can be used to generate a spider diagram that may serve as a comprehensive analysis tool. It also offers the opportunity to easily compare the performance of case studies with regard to livable landscapes. **FIGURE 2** shows an example of a diagram showing the performance of the stakeholders' regions according to different components of livability while **FIGURE 3** shows the similarities between the different stakeholder-plans in a dendrogram.

CONCLUSION AND OUTLOOK

The quantitative approach applied in the CAF is very useful to obtain an overview of different plans and practices and to compare their performance regarding landscape's livability.

But some indicators can only addressed qualitatively. During all phases of this research it became apparent that qualitative information is rather difficult to investigate, mainly because pertinent processes and procedures are normally not well-documented or reflected on in planning or policy documents. Moreover it was found that participation models and decision-making procedures have a high influence on livability of landscape and the valorization of landscape.

To overcome limitation of quantitative analysis an additional qualitative approach is used to understand how plans and policies address such issues. Qualitative interviews have thus become part of the CAF. They support the matrix and diagrams by providing important inputs to be considered during the analysis. The interviews have recently been conducted but the analysis is yet not finished.

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NEEDS HERITAGE A MUSEUM?
ON TRANSFORMATION, CONSERVATION AND PERSISTENCE IN THE
UNESCO-LANDSCAPE HALLSTATT-DACHSTEIN

PETER KURZ
Vienna University of Technology,
Department of Urban Planning
and Landscape Architecture, Austria
peter.kurz@tuwien.ac.at

Peter Kurz studied landscape ecology and landscape planning at University of Applied Life Sciences, Vienna. His PhD-thesis is on landscape transformations due to processes of globalization in agricultural systems in an Austrian rural region. Research and teaching interests contain analysis of cultural landscapes, focusing on local practices of governance and management shaping the land. Kurz's current research deals with questions of agricultural landscape and land-use as cultural heritage in context to the UNESCO-World Heritage Concept.

INTRODUCTION

The world heritage concept was introduced by UNESCO in order to protect outstanding examples of natural and cultural heritage. Within the program, the category of "organically evolved, continuing landscapes" takes a distinguished position, linking natural and cultural heritage and retaining "an active social role in contemporary society closely associated with the traditional way of life, in which the evolutionary process is still in progress. At the same time they exhibit significant material evidence of its evolution over time" (Droste 1995). Continuing cultural landscapes have achieved popularity within the world heritage program. Particularly numerous "traditional agricultural landscapes" have been recently nominated for world heritage (Fowler 2003). Still, the cultural landscape concept is the subject of controversial discussions and the target of criticism within debates on protection and management. Critics have stated that the heritage label promotes the creation of museum landscapes, aiming at the conservation of certain sceneries suitable for tourist marketing (Usborne 2009). Yet—so the critique—the museum concept provides little perspective or support for local
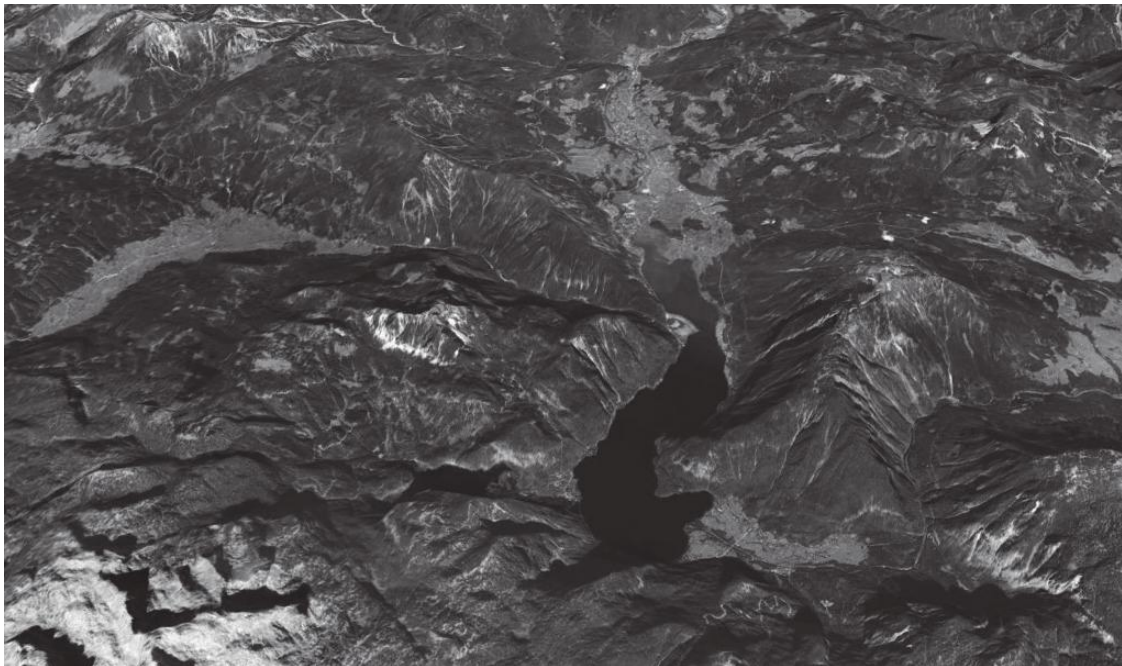
FIGURE 1 Location of the Hallstatt-Dachstein region

rural communities who utilize and maintain those landscapes within their everyday practice. The UNESCO claims a living heritage, instead of creating museum landscapes (Rössler 2006). But if conservation of historical landscape of universal value forms the counterpart to maintenance of everyday landscape, providing the basis of livelihood for local people, one may ask: (a) What makes a cultural landscape a "living heritage"? (b) When or why does a landscape become a museum? And (c) How can those processes be influenced by planning and management? We explored these questions in the case of the UNESCO world heritage landscape Hallstatt-Dachstein, where "musealization" has been the subject of reoccurring discussions. Investigating the effects of nomination as a World Heritage landscape and setting them in context to the current regional discourse and to the historical framework conditions that reasoned the nomination, we tried to figure out the ambiguities related to the heritage concept. As a conclusion, we argue that these ambiguities may also provide a starting point for (re-)definition of the heritage and—in a further context—for local peoples' empowerment and emancipation. This forms the groundwork for reflections on implications for the role of planning and management.

**THE HALLSTATT-DACHSTEIN REGION:
HISTORICAL HERITAGE AND TRANSFORMATION**

The Hallstatt-Dachstein region, situated in the south of the province Upper Austria, provides a landscape with an outstanding historical heritage. Equipped with a natural source of rock salt, the region has been shaped by salt mining activities back

from the Neolithic Ages (Moser 1994). Bloom as a mining region stretched from the thirteenth to the late eighteenth century, when a centrally organized resource management system was established under the royal house of Habsburg, combining forestry, water management, and the allocation of human labor in order to optimize exploitation of salt. This made the Hallstatt landscape a unique document of a historic alpine mining region (Jeschke 2002), and for resource management of the prefossil physiocrat age (Radkau 2002) [FIGURE 1].

Traditional resource management of the Hallstatt mining landscape was—above all—a social system, building upon strictly hierarchical orders. Its backbone was formed by a complex set of governmental regulations, defining property and usage rights and—in a broader context—fixing social relationships: top of this hierarchy was formed by organisations managing forestry, water, and mining under stately supervision. Authorities controlled the extensive forests and the bodies of water in the region in order to generate maximum surplus (Koller 1970). The other end contained numerous smallholder landowners, who had been settled as workers in mine, saline, forestry, and transportation logistics shipping the salt outside of the region. Sideline farming practiced in small units (usually only two to five hectare) for subsistence, supplemented by servitude rights for alpine pasturing within forest land are characteristic features of the Hallstatt landscape [FIGURE 3.1–3.5].

The traditional salt mining system was maintained throughout more than a 500-year period. Changes started slowly with

FIGURE 2 Core- and buffer zones of the World heritage
(source: UNESCO World Heritage Center)

mechanization of workflows and the introduction of fossil fuels from mid-nineteenth century. This brought along a gradual release of workforce in forestry and mining, starting in the nineteenth and stretching out over the twentieth century. Transformations were overlaid by the arrival of tourism, which gradually provided an alternative source of income and brought along the development of a modest regional tourism industry (Hellmuth 2011). However, the local populations' low endowment with capital, the peripheral location, and persistent relations in land ownership with dominance of large-scale landowners were responsible for a rather slow pace of change. It took until the nineteen-nineties for the coincidence of several events to cause a historic break in the regions' development: privatizations of state-owned forest, mining, and energy businesses and their transformations into stock corporations were followed by a massive fall in regional job markets. Changes in agricultural policies due to Austria joining the European Union impacted on the regions' sideline farm households, bringing along substantial decline in the support of smallholder agriculture. Both developments formed the starting point for a regional crisis, finding expression in demographic shifts and—as visual landscape evidence —abandonment of agriculture and farmland (Kastner 2012).

HALLSTATT AND THE UNESCO WORLD HERITAGE LABEL
Occasionally during this period, the Hallstatt-Dachstein region saw the introduction to the UNESCO world heritage list in 1997. Protection goals originally centered on the ensemble of the mining town of Hallstatt with its famous scenery

along the shoreline of the Hallstatt lake. But the surrounding agricultural landscape was recognized as an integrated part of the cultural heritage. However, activities in protection and management focused on monument protection, setting an emphasis on the built environment of the townscape of Hallstatt, and scattered monuments in the surrounding settlements. Nomination and award of the UNESCO label were received ambivalently: parts of the regional communities recognized it as a chance for (tourist) development, while others showed skepticism due to suspected impacts of conservation on local living environments. This is why state authorities' attempts on elaborating and implementing a management plan for the world heritage region—as instructed by the UNESCO—have not been successful so far. The World Heritage label, however, has become an essential part of regional development strategies [**FIGURE 2**].

HERITAGE OF THE WORLD HERITAGE
Since becoming World Heritage, the development of the Hallstatt-Dachstein region was shaped by an enormous growth in the touristic sector. The municipality of Hallstatt features 800,000 visitors per year, in relation to its 800 inhabitants. Tourist infrastructure was developed quickly, and tourism industry today certainly forms the main overall source of income. In the wake of marketing there is also a steady rise in the prices of properties and building land. Without a doubt, the heritage label has become the motor of regional economic development. At the same time we find dramatically proceeding demographic shifts. The region lost nearly twenty percent

FIGURE 3.1–3.5 The "continuing cultural landscape" of the Hallstatt-Dachstein region

of its population within the past fifteen years, which is far above average for Austrian rural areas. When asking for the reasons, the main argument is the lack of adequate jobs in the region. But rising property prices, declining quality of everyday life, and feelings of alienation due to tourist developments, secondary residences and a decline in public services for everyday life are also frequently mentioned by local people as reasons for abandonment **[FIGURE 4]**.

The regions' struggle with demographic decline increasingly gets linked to questions of maintenance of the material heritage of the cultural landscape. While maintenance of the built environment and infrastructure successively becomes an issue of external investors, sustaining of the agricultural landscape turns out to be a great future challenge. What might be judged as a "natural" development in the agricultural sector is also evidence for the regions specific heritage and the way it has been managed over the past years. When the traditional system of jobs in mining industries and sideline agriculture broke down, it was replaced by tourist development, promoted by marketing of the World Heritage. But this broadly happened without an integration of that group of smallholders, who gradually were forced to commute outside of the region for jobs. So the cultural landscape problem is linked to a monofunctional development strategy based on tourism and social and economic disintegration of parts of the local population within that development. It will strongly depend on how the region will be able to manage this aspect of its heritage. Advancing as a museum landscape or being able to sustain a "living heritage" will strongly depend on how the region will manage to integrate the persisting culture of smallholder farming into its development.
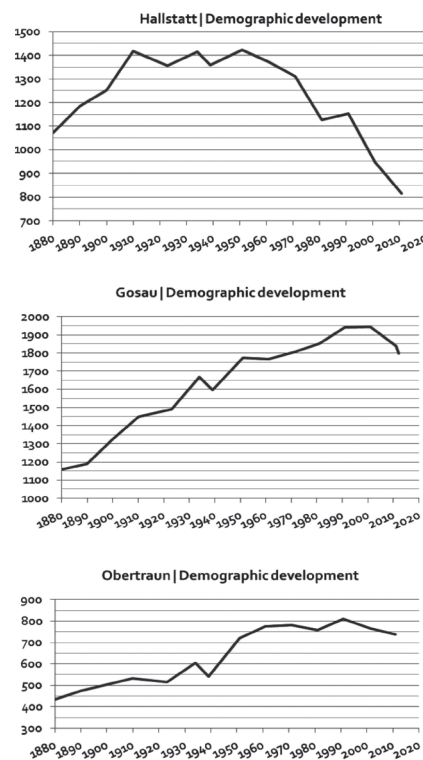
FIGURE 4
Demographic Developments in the Hallstatt-Dachstein region

CONCLUSIONS

Summarizing, we could learn from the Hallstatt case that:

a) The World Heritage label may contribute to regional development, but simultaneously can push tendencies of creating a museum of the regional landscape. Neither protection nor the heritage seal per se promote problems of creating museum landscapes but rather the way the protection status is handled by a region.

b) "Living heritage" relies on involvement of local people from all social groups to negotiate "their" heritage. In Hallstatt it is particularly the important group of sideline farmers who have to be integrated into development processes.

To support those processes, planning and management have to go beyond the question of conservation of the material heritage, taking into account economic and social "landscapes" of a region. In addition to providing technical knowledge, the planners' role lies in organizing framework conditions for transparent processes of communication and negotiation. Therefore, principles of adaptive management, as introduced by Fikret Berkes (2004) and Carl Folke (2006), may provide useful tools. Beyond, understanding of the "political ecology" (Widgren 2012) of a landscape, its historical structures and power relationships allows estimation of current dynamics and forms a groundwork for the planners work. Asking the question "who owns the landscape?" in its historical, social, and political dimensions appears crucial, if creation of a living heritage shall be goal of the planning process. Interpreted that way, the World Heritage might provide a powerful instrument supporting a democratic "policy of place" (Primdahl and Swaffield 2010).

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MAKE-ABILITY 2.0
THE POWER AND RESILIENCE OF LANDSCAPE FRAMEWORKS

MARLIES BRINKHUIJSEN
Wageningen University, Landscape Architecture Group, the Netherlands, marlies.brinkhuijsen@wur.nl

Marlies Brinkhuijsen is an assistant professor at the Landscape Architecture Group of Wageningen University, the Netherlands, since 2008. She has a PhD and a Master's degree in Landscape Architecture from Wageningen University. Before joining academia, she worked as a landscape architect and landscape planner in professional practice, and contract research for twenty years. Her recent research focuses on sustainable tourism and on landscapes and large parks in a peri-urban context. Her work is characterized by a multidisciplinary approach, and ranges from local to supra-regional scales. Her teaching, coordinating, and supervising activities over the last years included design studios, design theory, critical reflection on contemporary practices, research methodology, internships and theses at bachelor, master's and PhD level.

ANNET KEMPENAAR
Wageningen University, Landscape Architecture Group, the Netherlands annet.kempenaar@wur.nl

Annet Kempenaar is researcher and PhD candidate at the Landscape Architecture Group of Wageningen University. The topic of her PhD is "design in the planning arena." Kempenaar graduated as a landscape architect in 1994 and has worked as a professional landscape architect for commercial, governmental, and non-governmental organizations since. Currently, Annet Kempenaar is involved in two research projects. The first project is an international research project on the development of Landscape Perspective for the Three-Countries-Park, a cross-border area located in the Netherlands, Belgium, and Germany. The second research project, Analyzing and Exploring Sustainable Urban Strategies (AESUS), researches new planning and design concepts and tools, to deal with contemporary urban development processes.

landscape framework / greenways / green infrastructure / regional design / ecosystem services

In a time of devolution of governmental responsibilities (Allmendinger and Haughton 2010) and decreasing budgets, small-scale local interventions and grassroots initiatives are presented as the ways to successful development (Bijl et al. 2011). Large-scale integrated plans are no longer on the agenda. They are considered as technocratic, top-down remnants of a past era when a strong belief in make-ability determined planning and design practices. They are no longer useful or feasible today. Comprehensive landscape designs at a regional scale have had their day, it seems. But is it true that these plans, made in the heydays of regional landscape planning and design, are out-dated? Are we better off without them?

THE LANDSCAPE FRAMEWORK CONCEPT
In this paper we explore the contemporary and future value of comprehensive landscape frameworks based on a planning strategy that was developed in the Netherlands in the late nineteen-eighties, the so-called "casco-concept" or landscape framework concept. The landscape framework concept is closely related to the concept of greenways. Both concepts are based on networks of land containing linear
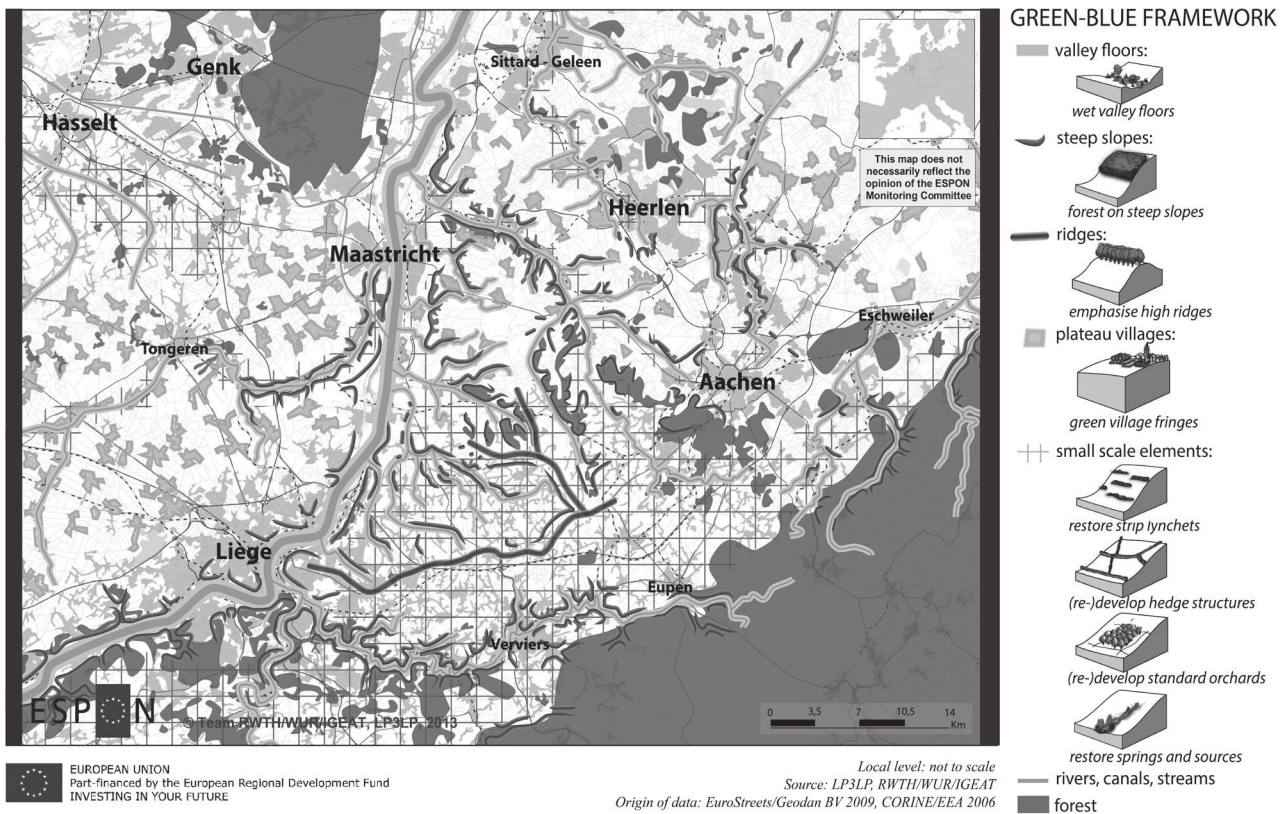
FIGURE 1 Green-blue framework
(source: Lohrberg et al./ESPON 2013)

elements, both are planned, designed, and managed for multiple purposes, and both are compatible with the principles of sustainable land use (Ahern 2005). However, the Dutch landscape framework concept goes beyond greenway planning with its exclusive focus on corridors. It can be characterized as a spatially integrated and multifunctional concept that encompasses the *entire* landscape. The landscape framework concept is based on the principle "separation if necessary, interweaving if possible." The concept spatially separates forms of land use with different rates of development, creating maximum flexibility for highly dynamic functions and long-term spatial stability for functions, which are best served by little or no land use dynamics. The "low dynamic" framework consists of landscape elements providing a sustainable and stable base for nature, water management, and recreation as well as the much-needed connectivity for these functions. The framework is large enough for viable populations and sustainable hydrological and ecological management. The "highly dynamic" patches are large enough to provide opportunities for viable agriculture and other more highly dynamic land uses. The patches provide flexibility whereas the framework provides stability (Kerkstra and Ahern 1994). The spatial representation of framework and patches, the form, is "dictated" by the landscape in question (Kerkstra and Overmars 1985; Ahern 2002) [FIGURE 3].

THE OOIJPOLDER

Many Land Use Plans in the nineteen-nineties were based on this landscape framework strategy, particularly in river landscapes and sandy landscapes. The Ooijpolder and the neighboring flood plains of the Millingerwaard, a river landscape between the city of Nijmegen and the Dutch-German border, were among them. In the floodplains, river dynamics were allowed in order to create conditions for new natural values to develop. The basin areas were redesigned into a clear multifunctional landscape where agriculture could survive far into the future (Helmer and Smeets 1987). The ecological development of the flood plains in the Millingerwaard turned out to be very successful, not only in terms of restoration of dynamic natural processes and biodiversity, but as a recreation area as well.

At the same time, future prospects for agriculture became less positive. While the works related to the Land Use Plan hadn't even been completed yet, farmers in the Ooijpolder gladly took advantage of the success of the Millingerwaard floodplain and welcomed new opportunities for landscape-based recreation and tourism. The area was labelled as an experiment for green services and landscape investments with public subsidies (Overbeek et al. 2011) and a Landscape Development Plan was made in 2004. Whereas public and semi-public authorities were dominant in land purchase,

FIGURE 2 Project development, April 2013
(source: http://dev.mapgear.nl/vianatura/)

development, management, and maintenance at the time, this plan primarily aimed at private lands and landowners for the development of new landscape elements and recreational access to the landscape (Van Blerck and van Ziel 2004). A strategic perspective for the whole area with a series of design principles was elaborated into concrete implementation plans at the scale of individual landowners. A foundation was established, Via Natura, to manage contracts with farmers and land owners, and to administer a fund to compensate for ecosystem services with a thirty-year guarantee. The sources of the fund were both public and private, a break with common practice. In April 2013 the first phase of landscape development in the area was completed. Twelve landowners converted 5% of their land into a network of landscape elements and paths (www.vianatura.nl) [FIGURE 2].

THE THREE-COUNTRIES PARK
In the same period as the Landscape Development Plan for the Ooijpolder was made, the applicability of the landscape framework concept was challenged in another area, the hilly landscape of South-Limburg. A landscape vision was drawn up for the area in 2007 (Kerkstra et al. 2007). The landscape, with its plateaus, steep slopes, and river valleys is highly valued for its ecological, cultural historic, and scenic qualities. The landscape designers, who had been

among the developers of the landscape framework concept, designed a landscape framework based on the core qualities of the landscape.

In 2011, the initiative was taken to develop a landscape perspective for the preservation, enhancement and development of the landscape in the three-countries-park, a cross-border area located between Maastricht (NL), Hasselt (BE), Liège (BE), and Aachen (DE). For this Landscape Perspective a different approach was chosen compared to the Landscape Vision for South Limburg. Since landscape planning and design differ substantially in the three countries, and because the Dutch situation has altered since 2007, the approach focuses on guiding principles for landscape development and design and not on a blueprint approach [FIGURE 4]. Each of these guiding principles is related to several ecosystem services, and through the application of the guiding principles a green-blue landscape framework will emerge. The guiding principles on the one hand leave room for culturally embedded, local place-based solutions, and realization strategies, but at the same time enable the development of a continuous and connecting framework throughout the park also includes guiding principles relating to the urbanised context. These principles safeguard the necessary space for the green-blue framework as well as the access to the landscape for recreation and tourism purposes [FIGURE 1].
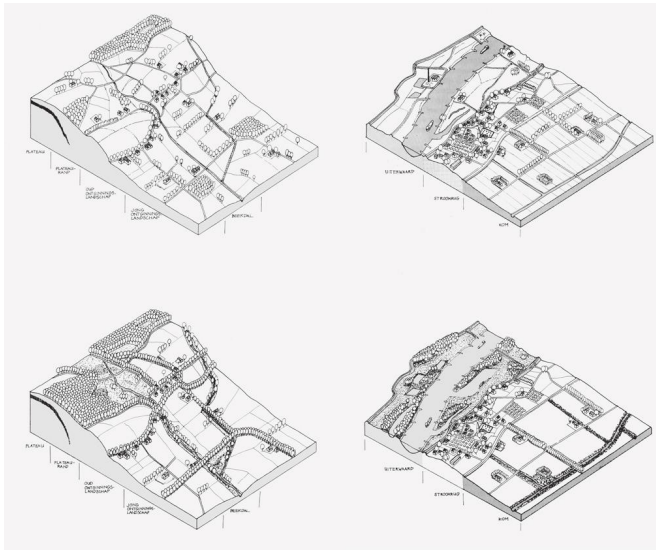
FIGURE 3 Landscape framework concept in sandy uplands (left) and in river areas (right) (source: HNS 1991)

1. Wet valley floors
2. Forrest on steep slopes
3. Emphasize high ridges
4. Green village fringes
5. Restore strip lynchets
6. (Re)develop standard orchards
7. (Re)develop hedge structures
8. Restore springs and sources
9. Restricted building
10. Building fitting village structure and silhouette
11. Landscape based restructuring of built up areas
12. rural- urban accessibility for slow traffic
13. Improved access to heritage and nature sites

FIGURE 4 Some guiding principles for the Three-Countries-Park (source: Lohrberg et al./ESPON 2013)

CONCLUSIONS

In both cases a landscape framework plan (the Land Use Plan in the Ooijpolder and the Landscape Vision in South Limburg) was later complemented by other strategies that better addressed the urban and socio-cultural context of the area. It also appears that ecosystem services play a crucial role in the implementation and management of a landscape framework. They bridge the gap between the framework, which was originally based on government-led implementation, and today's reality of local initiatives and changing coalitions.

The cases illustrate that landscape frameworks still can provide a strong basis for the conservation and management of cultural landscapes and ecological values; not as blueprints defining land use possibilities, but as frames of reference or future perspectives that guide decisions and elaborations on a detailed scale by means of guiding principles. Complemented with urban and cultural strategies, and in combination with ecosystem services, they seem to be resilient and able to adapt to changing policies and funding.

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UASI—URBAN AGRICULTURE SPATIAL INDEX

GESA KÖNIGSTEIN
Technische Universität Berlin, Fachgebiet landschaftsarchitektur.freiraumplanung, Germany
gesakoeni@hotmail.com

Dipl.-Ing. Gesa Königstein, is a registered landscape architect and an assistant professor at the Department of Landscape Architecture and Environmental Planning, Chair for Landscape Architecture and Open Space Planning, Technical University of Berlin and also teaches at the Münster School of Architecture. Her professional practice, teaching, and research focuses on process-based planning strategies with an interdisciplinary focus at the interface of landscape architecture, ecology, and urban design.

ANNE-KATRIN FENK
MOD Institute, Germany
designzeit@googlemail.com

Anne-Katrin Fenk is an urban designer and co-founder of MOD Institute. She is highly experienced in international research projects on urban design and urban development, especially in Asia. She worked as an assistant professor at the Technical University Berlin, managed several international research and open space platforms on urban development as well curated some exhibitions on India's urban landscapes.

design process / urban agriculture / new-coding /
transmission landscapes / what is urban?

PROLOGUE
A PROCLAMATION

Urban Agriculture Spatial Index (UASI) is a new tool for designing productive and affordable landscapes—the "transmission landscapes" of the cities of tomorrow. On the basis of urban agriculture, UASI is a result of a new urban design process. This design process is characterized by a shift away from designing hybrid landscapes towards an essential new-coding of morphologies of productivity. In consequence the traditional understanding of a landscape as "green and good" (Schneider 1999) will be replaced by a conception of a landscape as programmed, progressive and productive, a transmission landscape (TL). This is in line with Donna Haraway's precisely formulated idea that innovative and visionary strategies need to conquer concepts of dichotomy to overcome embedded conventional connotations and enrol future visions (Haraway 1995). The basic question for TL is: what makes a city?

UASI was first developed for the Berlin-competition "Parklandschaft Gatow—Urbane Landwirtschaft" and was awarded a special recognition (Königstein and Fenk 2011).
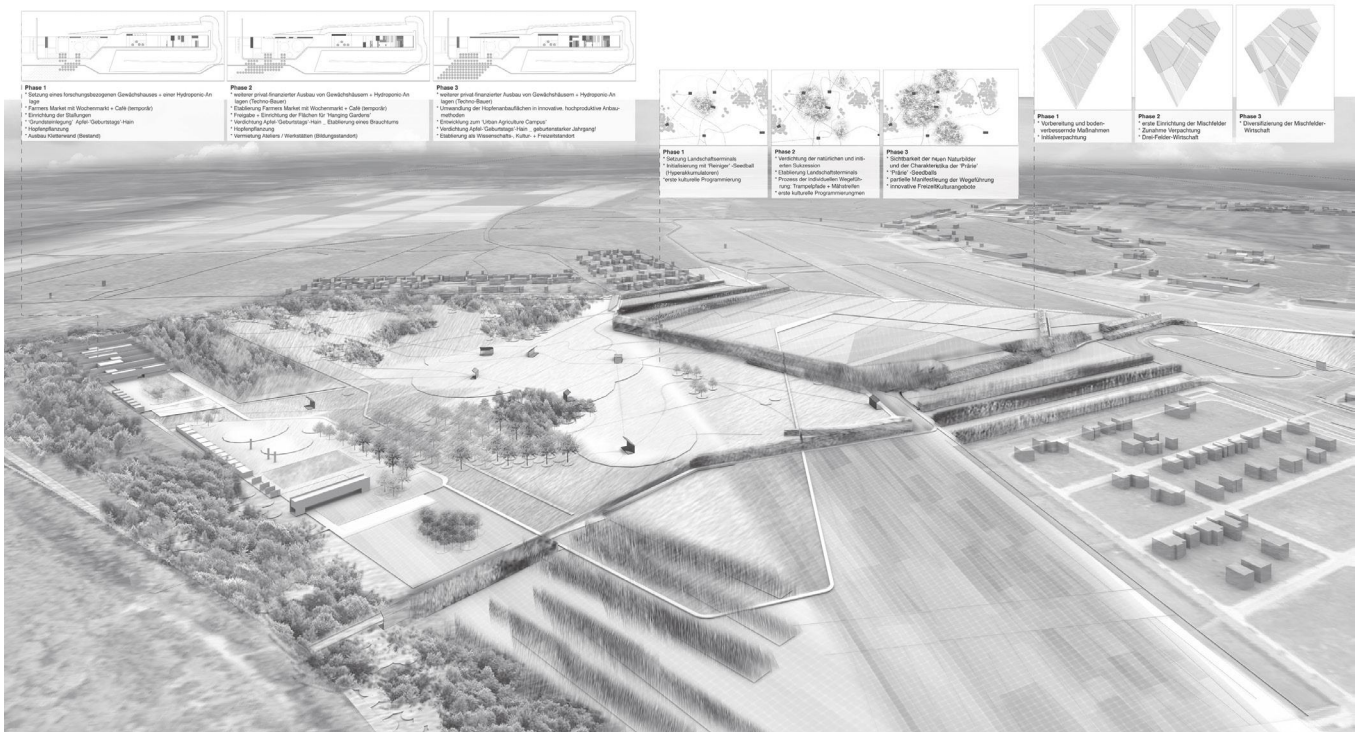
FIGURE 1 "Transmission Landscape" Berlin-Gatow (by Königstein and Fenk)

WHY URBAN AGRICULTURE

The idea of urban agriculture (UA) has become very popular in recent years and currently seems to be a new paradigm for urban development. As a trend it forms part of the urban development discourse, especially when cities are in crisis. Contemporary debates repeatedly address UA as a key player for solution finding and optimising cities. Hence UA as a planning concept is often reduced to a strategy of healing and romanticizing in combination with cutting edge technologies—a counter-world to urban realities. Also, UA is not addressed as a strong key parameter of urban development.

TRANSMISSION LANDSCAPES

UA has huge potential for dealing with the emerging complexities of cities. But as long as productivity is mainly seen as a question of agricultural production, UA cannot function as an innovative link for dealing with "hard" urban issues. Some of the contemporary UA landscapes are already more often established sites of co-production than traditional open spaces. This trend underlines the need for redefining productivity as the key layer of multiply coded, productive spaces that enable various readings and interpretations. This critical understanding can create new opportunities of activating and stimulating landscapes to transmission landscapes and triggering linkages with urban systems on a

new scale. Inherent to the concept of TL is the translation of information and parameters to enable processes. It is not an implementation strategy, but the application of specifics of productivity to urban spaces, permitting a new-coding and opening up possibilities to really create something: **take it, process it and spatialize it!** Interestingly, this shift towards exploring transmission landscapes would make it easier for designers to deal with urban realities of landscapes and nature. Particularly suited are landscapes with transition potential: landscapes such as redundant infrastructural spaces, spaces in functional transition or economically pressurised spaces, and peri-urban interfaces consolidated by various forms of productivity.

The new-coding of productivity should also be considered with a new-coding of design processes. Contemporary design processes consequently require socio-political programs interlinked with economic values and time. The design process furthermore needs to be understood as a task in which the designer bears responsibility for a critical "Raumpraxis." A "Raumpraxis" that includes spatial design and provides preconditions for participation and collaboration,[1] so that urban development becomes part of civil society and political impact can be implied. This would change how we act as designers.

UA raumdichte index

10 jahre

Säume
Alley-Cropping
3 / 6 / 9 jährig
KUP II 10 jährig
KUP I 4 jährig

räumliche dichte

UA index

BEWIRTSCHAFTUNG
MATERIALITÄT
ATMOSPHAERE
ARTIFIZIELL
VEGETATION
TRANSFORMATION
DICHTE
PROZESSUAL

100 % urban 0 %   0 % rural 100 %

UA

Energie Bauer

kurzumtriebsplantage 4 jährig
kurzumtriebsplantage 10 jährig
alley croping 3 / 6 / 9 jährig
ölpflanzen
faserpflanzen
mähstreifen
umweltschutz
ökologische bildung

UA vegetations index

aspen
balsampappel
pappel-klone
robinia pseudoac.
populus-hybride 275
salix `carmen`
leguminosehaltige
pflanzmenge

wiesen
säume
hecken
säume

ölfrüchte
öllein
raps
faserpflanzen
fenchel
calendula

UA ökonomie index

10 jahr

KUP II

5 jahr

2 jahr

1 jahr

alley-cropping KUP I

UA raumdichte index

10 jahre

Hydroponics
vertikale Gärten
Markt
Reitsport/Pferde
Forschung/Kunst/Kultur

räumliche dichte

UA index

BEWIRTSCHAFTUNG
MATERIALITÄT
ATMOSPHAERE
ARTIFIZIELL
VEGETATION
TRANSFORMATION
DICHTE
PROZESSUAL

100 % urban 0 %   0 % rural 100 %

UA

Techno Bauer

hydroponics
bodenlose landwirtschaft
hopfen
hanging garden
kreislaufsysteme
forschung / seedbank
biomasse
pflanzenkläranlage

UA vegetations index

hopfen
tomaten
wein
hydroponic *1*2
stauden

obst
bis 2023
obst
bis 2017
obst
bis 2012

UA ökonomie index

campus
hanging
garden

hydroponic *2
bodenunabhängige
landwirtschaft
hydroponic *1
bodenlose landwirtschaft

10 jahr

cafe

5 jahr

2 jahr

1 jahr

lokaler markt

reiten

klettern

FIGURE 2 Four "UASI-Curators" (by Königstein and Fenk)

What is needed to underline the approach above is a proactive urban tool. A test balloon, that explores what is possible, impossible or even what remains open. That's when the new tool UASI comes into play, combining discourses of nature, landscape, and urbanity.

UASI (URBAN AGRICULTURE SPATIAL INDEX)

The paradigm shift in understanding UA on the basis of re-defining productivity is essential for designing UA. By removing the primary connotations of production, we expand the discourse of UA with (a) spatial, (b) cultural, (c) political parameters, and introduce (d) multi-authorship productivity. We organized the output of this reflection in an index, which we call UASI—Urban Agriculture Spatial Index. UASI is a new tool to understand landscape not as a problem but as an extended space of possibilities to address particular urban systems.

Three main parameters, which are immanent to the concept of transmission landscapes—productive, programmed, and processed—are defined as follows:

Productive + If UA is derived from primary production, it is difficult to legitimize it as a tool for food supply. The outcome in most cases is irrelevant compared to the food system of a city. This relates furthermore to the question: what is productivity? In contrast to the global status quo of quantity related figures, UASI demands a set of diverse types of productivity:

cultural, social (economic), and spatial. In result productivity is no longer be considered as yield per unit area, but yield per space. We believe that this step is crucial to design and build future urban spaces. Hence the designer/architect will be substantially responsible for getting involved into the design of productivity, as well as the co-producers at site.

Program + The central idea of UA already inherent altered programs—such as cycles of seeding, growing, and harvesting, but also spatial programs—programs of strategic leftovers, crop-rotating, and technological achievement (hydroponics, application of substrates). But if it comes to urban planning, such crucial parameters as density and contrast are not being discussed as evident programs of UA. At this point UASI is capable of increasing the dialogue. UASI expands density by its basic connotation as density of the built environment by including density of experiences, density of contrast, density of processes, and density of networks. Hence UASI as a tool rejects optimization and homogenization as design objectives and embraces heterogeneity. Heterogeneity is a precondition for the spatial potential of the next society.

Process + In contrast to the above outlined new-coding of productivity and programs it is much more complicated to carve out the immanent spatial potential of UASI to process (transmit) urban open spaces. The challenge is embedded in the design process itself. If UASI is chosen as a tool, the

Kultur Bauer

landschaftsterminals
gastronomie und lokaler markt
schulgarten
experimentierfelder
sport und freizeit
geburtstagshain
ua festival
kelterei

UA raumdichte index

10 jahre

Seedballs
Sukzession
Flugwinde
Trampelpfade
Experimentierfelder
Wild Life Value
Landschaftsterminals
Farmers Market

räumliche dichte

UA index

BEWIRTSCHAFTUNG
MATERIALITÄT
ATMOSPHAERE
ARTIFIZIELL
VEGETATION
TRANSFORMATION
DICHTE
PROZESSUAL

100 % urban 0 % 0 % rural 100 %

UA

UA vegetations index

seedball reiniger
hyperakkumulatoren
seedball
glatthaferwiese
seedball
prärie
sonnenhut
sonnenauge
rudbeckia
pomolog.
garten
vintage garten
biedermeierrose
grüne eierpflaume
graft garten

UA ökonomie index

10 jahr
5 jahr
2 jahr
1 jahr

kelterei

cafe
farmers market
ua festival
kulturterminals
patenschaft
experimentierfelder
pacht

UA Bauer

fluglose landwirtschaft
mischkulturen
brachenmanagment
pachtland
leguminosen
hackfrüchte
arzeneipflanzen und gewürze
beerenfrüchte

UA raumdichte index

10 jahre

Beerenfrüchte
Fruchtfolge VI
Fruchtfolge III
Fruchtfolge II
Fruchtfolge I

räumliche dichte

UA index

BEWIRTSCHAFTUNG
MATERIALITÄT
ATMOSPHAERE
ARTIFIZIELL
VEGETATION
TRANSFORMATION
DICHTE
PROZESSUAL

100 % urban 0 % 0 % rural 100 %

UA

UA vegetations index

ökologischer Anbau biologischer An

getreide
leguminosen
brassicaeen
humus
hackfrüchte
arzenei
gewürz

UA ökonomie index

10 jahr
5 jahr
2 jahr
1 jahr

leguminose
aufbau
+ erbse
+ leindotter
+ hafer
hackfrüchte
fruchtwechsel
+ topinambur
+ kartoffel
gewürze
sukzessiv
+ fenchel
+ kümmel
pacht UA
periodisch
+ aktivisten

design process ('Raumpraxis') moreover deals with a more complex reference system of today and tomorrow. And can be applied on a multiplicity of scales—from micro to macro. That means a mix of processes will operate these new open space typologies. Processes of interacting, enabling, and stimulating that run in parallel will be mandatory. In use we posit, that new processes will elaborate intuitively by new stakeholders and co-producers.

CONCLUSION

The work with UASI, due to the competition, led to a design of a spatial entity of a new productive (infra)structure which on the one hand is highly urban and heterogeneous and, on the other, capable of being green. For the competition a minimum of four actors had to be developed, who curate productivity, programs and the interwoven processes of participation ('Teilhabe') [FIGURE 2]. The resulting design introduced open spaces of new and unfamiliar images. The future-oriented design language was
logically continued in the distribution of space for a multitude of participating actors as co-producers and co-designers within a forecast of thirty years. In use it is not a design climax for the designer but a simultaneous definition of scope and (spatial) framework.[2] Hence UASI is not concerned with hybridizing spaces but with the transmission and spatialization of productivity in its broader sense—resulting in transmission landscapes—which address the task of designing

new and affordable landscapes for the city of tomorrow. In conclusion it can be said that UASI as a tool designs spaces of permanent flux and helps to shift the primary concept of urban agriculture from urban farm to farm urban.

1 "Statt Partizipation als eine von oben herab genehmigte Öffnung der Entscheidungsprozesse zu verstehen, verstehen wir Partizipation von Unten, als individuelle Zugangsstrategie, als post-konsensuelles Mittel … ." Miessen, M. (2012) Albtraum Partizipation. Berlin: Merve, 10

2 "auch design darf vergehen, sich auflösen im gebrauch. selbst wenn es als bestmöglichstes produkt entworfen wurde." Aicher, O. (1992) ein apfel in analog und digital. Berlin: Ernst & Sohn, 154

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GREEN INFRASTRUCTURES

FROM GREENBELT TO INFRABELT—LONDON'S GREEN BELT AS MODEL FOR A SUSTAINABLE LANDSCAPE?

VANESSA MIRIAM CARLOW
Braunschweig University of Technology, Institute for Sustainable Design, Germany
v.carlow@tu-braunschweig.de

Prof. Dr. Vanessa Miriam Carlow was appointed full professor at the TU Braunschweig in 2012. She is a licensed architect and planner, and co-founder of COBE, based in Copenhagen and Berlin, a practice which focuses on architecture, urbanism, public space, and research. Carlow studied architecture and urban design at TU Berlin and TU Delft. She holds an MA in Urban Management from five European Universities, and a PhD from the Center for Urbanism at the Royal Danish Academy of Fine Arts in Copenhagen. Carlow has lectured and taught at universities worldwide, including Tsinghua, Tongji, RISEBA, and Penn State University. For her work as an architect, Carlow has received several awards, including the Golden Lion of the 2006 Venice Architecture Biennale for her contribution to the Danish Pavilion.

sustainable urban development / spatial containment / London Green Belt / strategic planning / land use pattern

In light of the current ecological and economic crisis, and the call for a more sustainable urban development, spatial containment strategies are at the forefront of urban discourse all over the world. London's Green Belt (LGB) is the oldest and largest spatial representation of a containment strategy in modern times. It is therefore an important case when it comes to discussing whether containment and spatial constraints imposed by planning can contribute to a more sustainable urban development.

Throughout the respective literature, the LGB has been discussed as so successful in preventing the dispersion of the urban agglomeration—that its conception has been emulated in towns and cities worldwide. Almost every aspect of the LGB has been analyzed and discussed: the history and authorship of ideas (Thomas 1963), the importance of the green belt for strengthening the discipline of urban planning (Hall 1988 2003), the change of land prices in London (Munton 1983), social aspects, such as increased commuting times (Hall 1973), and more recently, the influence of the LGB as an example for strategic urban planning for communities worldwide (Freestone 2002). However, a portrait of

FIGURE 1 London Green Belt outside Welwyn Garden City

the LGB as a landscape is lacking in the current scholarship. The claim that the Green Belt promotes a sustainable, or environmentally friendly development is therefore scientifically unsubstantiated. A study mapping and analyzing the use of land in the LGB adds to the general understanding of the LGB, and contributes to the discourse on whether such strategies do indeed promote a more sustainable development in urban areas **[FIGURE 1]**.

THE USE OF LAND IN LONDON'S GREEN BELT TODAY

I constructed a map in order to analyze the LGB. The base map was composed of satellite images from Google Earth, cross-referenced with the vector-based, single-layered, official map provided by the London Green Belt Council and the British Government (2009). That map of the LGB is widely published in official documents, and also referred to in print media (Burdett and Sudjic 2008). It suggests a continuous green carpet around London.

In contrast, my map of the LBG distinguishes the following basic layers: settlements, industry, forests, fields, water, infrastructural networks (including highways, railways, waterways, airport), and large-scale sport venues. "Green" surfaces comprise only three of the eleven layers of the map **[FIGURE 2]**. Today, the LGB has an estimated area of approx. 4,856 square kilometers . (Humpert 2010) In comparison, the Greater London area is 1,579 square kilometers. (Humpert 2002) That means that the LGB is roughly three times larger than the city it contains. In the LGB, large patches of settlements cover an area of roughly 1,517 square kilometers, almost the size Greater London itself (1,579 square kilometers). These large patches are "holes" that are exempted from the legal regulations that govern the use of land in the green belt, which for example prevent the construction of housing. Some of them

are New Towns or other settlements, like Harlow, Hemel Hempstead, or Ascot. Together there are 773 of these large holes in the Green Belt. There are also other sealed areas, small patches that sprinkle the belt more or less continuously. Together, there are more than 7,000 of these smaller patches, occupying an area of 432 square kilometers, roughly a quarter of the size of Greater London. There are also areas that are used by large-scale industries, near harbors or airports. Together, these industrial areas cover 101 square kilometers. There are nineteen airports located in and around the Green Belt, serving both civil and some military purposes. Together, these airports occupy roughly thirty-seven square kilometers. Large sports venues, like horse racing tracks, are also located inside the Green Belt. They cover roughly 2.3 square kilometers of land. All together, these built up areas are one third larger than the land covered by Greater London itself. All these dominantly sealed areas sum up to roughly forty-three percent of the area of the LGB. The LGB is thus not a continuous open space at all **[FIGURE 3]**. So what of its "green" space? 798 square kilometers of the LGB is forests (15.7%). This is not one continuous forest, but roughly 5,400 patches of forest. One hundred square kilometers of the LGB is covered by water (2%). One hundred forty-eight square kilometers is golf courses (2.9%). The remaining 1,720 square kilometers of the Green Belt (35%) is used as agricultural land, including fields, grazing land, and meadows. Together, this sums up to 2,766 square kilometers of open land. That equals 57% of the LGB. With 43% of sealed land and 57% green. The LGB is thus just a little bit more "green" than built over.

INFRA-BELT

The LGB was originally conceived as a lush, green, nourishing, and healthy compliment to the unhealthy and

FIGURE 2 Revised map of the London Green Belt

FIGURE 3 Built up land and infrastructures in the London Green Belt

expanding industrial metropolis of the eighteenth and nineteenth century. Yet, as the study shows, the LGB itself has transformed into *the* infrastructural space catering many of the needs of the global city London in the twentieth and twenty-first century. In fact, today, the LGB serves as the very physical infrastructure of London, containing: mega-high-ways, the high speed train corridor, and at the same time, combined one of and the world's largest airport terminals. The cross-border flows of capital, labor, goods, raw materials and tourists eminently inscribed in the global economy in which London has been successful in preserving its economic dominance—arrive or terminate in the LGB of today. Juxta-posing the different functional layers of the map with noise maps, it also becomes clear how the large infrastructures affect the landscape: especially close to the two newer airports Luton and Stansted, the most traffic-burdened spaces are located just outside the LGB borders beyond which growth is severely restricted. It must thus be stated that the severe restriction to the expansion of London imposed by the LGB has actually facilitated the location and steady extension of four large airports that finally cater to the city! The LGB is one of the most frequently flown over tracts of land on earth. My study also shows the impact of the M25 motorway—the most traffic-burdened road in the whole country. Noise levels here are calculated on the base of traffic flow and lie well above the unhealthy level of the 60dB, which can cause severe stress symptoms (Defra 2008).

Compared to the official map of the Green Belt, my revised version deducts all areas under much excessive noise impact and which are not green. This revised map "LGB Revised" reveals a drastically different image of the LGB: the landscape is not continuously green, but fragmented into many small patches of built up land and criss-crossed by noise pollution, which prevents the enjoyment of this land for leisure [FIGURE 4].

This study reveals how the LGB, as the dominant urban structure around London, has actually been developed. Instead of preventing the spread of urban London beyond its boarders, the LGB has supported the outsourcing of vital infrastructures away from the city center, making space for intense inner urban densification.

As one consequence, the transition from city to country is not very pronounced at the LGB's fringe. A section through the agglomeration would show a densifying center with a gradually decreasing building density towards the edge, followed by a corridor of rather large infrastructural, recreational, industrial, and retail uses that are interspersed by open land.

The dominant border shaping the form of development is not the city limit toward the Green Belt but rather the M25 motorway. Since the statutory border to development (LGB) is different from the layout of the main infrastructure (M25, radial roads, and airports)—they are not congruent. A certain form of urbanization fills the gap in between. How can this be described: even though the area is not continuously built up, and not dominated by housing, it is most certainly not rural, nor dominantly "green." Yet, the ring cannot be defined as sprawl, since housing is largely absent. Rather than "Green Belt," a new vocabulary is required to describe the particular qualities and potentials of this area. I propose: London Infra-Belt. The landscape of this London Infra-Belt connects the local and the global sphere. Here, the world leaves its footprint on the London territory [FIGURE 5].

CONCLUSION

The main motivation to create a Green Belt around London in 1958 was to prevent the spread of the city into its sur-roundings, to retain some "natural" or rural landscape close to the city, and later to counteract the negative effects of

FIGURE 4 Noise impact on the London Green Belt through all traffic
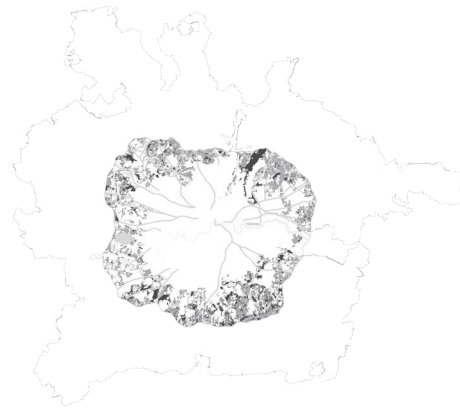
FIGURE 5 From London Green Belt to London Infra-belt

sprawl. Today, the interdependence between London and its surrounding is very strongly depicted in the use of land through physical networks.

The previous research has shown that the LGB has not prevented the spread of London, but only the spread of London's housing. Housing is only one function in a city or in an urban agglomeration—even though it may be the most generic and dominant one. The implementation of the LGB excluding housing from this space has thus fostered a functional division of uses in the agglomeration, triggering the need for certain forms of traffic that would otherwise not exist. On the other hand, it must be stated that the global city of London, with its role in global markets and global streams of communication, is highly dependent on specific infrastructures facilitating that status (Sassen 2001). Airports are some of the most essential of these infrastructures, since they mirror the relations of the global city to the rest of the world, and its connections in physical space. (Wichmann Matthiesen 2004) It is ultimately the existence of the LGB as an open landscape that has facilitated the location and extension of the airports around London. It is the very absence of housing as a base layer of the urban landscape that has eased the operation of these airports. These ambiguities lead to question whether the LGB indeed supports "sustainable development," as it has often been claimed, or whether it is just a strategic tool to foster another kind of urban development or inner-urban densification. With the widest possible exclusion of housing from the LGB and its concentration into clearly defined islands within the Green Belt a clear economic dependence between the metropolis and its surroundings is revealed. Also with regard to the location of infrastructures outside its own boarders, this dominance of the city over the countryside is inscribed. Nonetheless, there is potential that both spheres—the urban and global versus the rural—could form more meaningful

hybrids. The urban fringe represents the transition between the urban area, and the formerly dominantly rural area, and as such provides the potential to become a location for many activities that link the two even stronger than through recreation and the provision of space for infrastructure. This landscape still offers open space for new uses or programs that could add to the sustainable development of London.

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ACTIVATE URBAN LANDSCAPE NETWORKS: REGIONAL PARK RHEINMAIN—NEXT STEPS

JÖRG DETTMAR
Technical University of Darmstadt, Faculty of Architecture, Design and Landscape Architecture, Germany
dettmar@freiraum.tu-darmstadt.de

Jörg Dettmar studied landscape architecture in Höxter and Hannover until 1985. He worked in the fields of botany, landscape, and urban ecology and completed his PhD in 1992 at the TU Berlin with a survey about spontaneous vegetation on industrial derelict land. In 1995 after working in different planning administrations, he became the responsible manager for the Emscher Landscape Park in the Ruhr District within the International Building Exhibition Emscher Park. Since 2000 he has held the chair for Design and Landscape Architecture at the Faculty of Architecture, Technical University Darmstadt. He teaches landscape architecture and urban ecology, his research focuses on the development of urban landscapes and the role of green spaces within integrated regenerative energy concepts in urban areas.

urban landscape / regionalpark / metropolitan area FrankfurtRheinMain / actor networks / communication platform / moderation of urban landscape

In urban agglomerations most of the area shows a patchwork consisting of settlements, infrastructures, and free open spaces of different sizes. This peripheral space is not only dominant for the edges of agglomeration; they pervade the entire urban landscape. "Urban landscapes" have been the subject of many scholarly and planning studies in recent years (Burdack and Hesse 2006). The phenomena, processes, and potential of these spaces have been examined from a theoretical perspective and planning strategies have been developed.

The RheinMain Area—here taken as the Metropolitan Region RheinMain with about 15,000 square kilometers and 5.6 million inhabitants—is one of the fastest growing and economically prosperous urban agglomerations in Germany. The growth of the settlements and the expansion of the infrastructure have been massive over the last one hundred years. Since the nineteen-seventies, regional planning has tried to slow down the urban growth with little success (Boczek 2007) **[FIGURE 2]**.

FIGURE 1 View of the skyline Frankfurt within the Regional Park RheinMain

This aspiration gave rise to the Regional Park RheinMain at the beginning of the nineteen-nineties. Its specific goal was to protect green spaces within the fast growing urban agglomeration around Frankfurt. This included bringing this landscape as a leisure-focused area into public awareness and increasing the value of its design and ecology. Over the last twenty years, a 530-kilometer network of Regional Park routes and more than 200 local projects have been created [**FIGURE 1**].

In the beginning, the Regional Park occupied about 1,400 square kilometers in the center of the agglomeration around the city of Frankfurt. Now it has grown to an impressive 5,600 square kilometers. Currently, 127 local authorities and seven rural districts are involved. Additional funding is provided by the state of Hessen and particularly by FRAPORT AG. The entire system has been managed by a small Regional Park umbrella organisation since 2005. The considerable increase in area makes the visibility of the Regional Park a complex issue. In future, due to limited financial and human resources, work in the Regional Park must be more focused. It is necessary to inform the public about core issues and increase the visibility of the Regional Park [**FIGURE 3**].

For further development of the Regional Park, the question "Who owns the landscape?" is of great importance. Like in

other regions, this urban landscape is marked through various different interests and perceptions. On one hand, the economic aspects are of core interest for landowners, farmers, and foresters, as well as real estate and infrastructure developers, and politicians. On the other hand, the ecological and cultural issues are emphasized also by politicians, as well as institutions, and people working for nature conservation, cultural heritage, or spatial planning. The social dimension of the landscape is above all important for the people using it for recreation and leisure activities. For sure this is much more complex. So the regional economy for example mentions the importance of an attractive landscape for the economic value of the region repeatedly.

In the past an infrastructure for recreation within the Regional Park was built with regional routes for hiking and biking and to develop different local projects like small parks, landmarks, or art installations. This has been intensively used by the people who, however, mostly didn't link it to the project of the Regional Park. Now piecemeal improvement of the landscape cannot continue in the traditional way due to economic and human resource restraints. In the future the Regional Park needs much more support by the people, the municipalities, and sponsors. Therefore it is very

Shrinking open space in the RheinMain region 1925 - 1990

Farmland   Forest

1925   1990

Boczek 2007
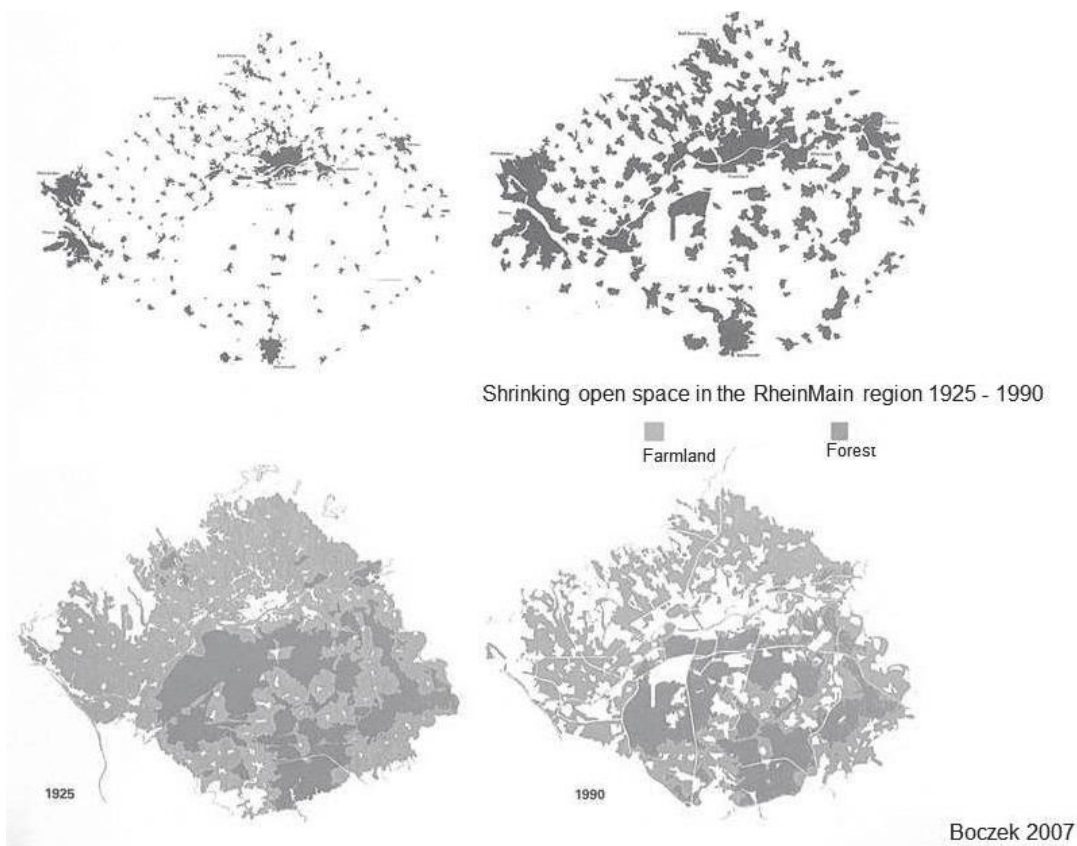
FIGURE 2 Growing settlements and shrinking open spaces in the agglomeration RheinMain 1929–1990

important that the park is recognized by the people and is able to attract their interest and involvement **[FIGURE 4]**.

Besides, during the next development phase more attention must be paid to the urban landscape of the metropolitan area. Particularly in the center of the agglomeration, a good quality of the landscape is very important. The density of settlements and infrastructure is very high and the still existing free open spaces are objects of many interests. On the other side, the need for recreation purposes is very high. This urban landscape is specifically characterized by fractures, contradictions, and constant changes. Traffic and noise are integrated elements. Insurmountable borders and visual pollution by ugly buildings are also characteristic. You get lost in this urban landscape without a means of orientation. Even the Regional Park routes in this area are sometimes confusing the users and the park is not at all recognizable **[FIGURE 5]**.

One approach to change this is the development of a central and easily visible ring route around Frankfurt. The new ring route has a total length of 190 kilometers. It connects characteristic parts of the urban landscape, leads through difficult parts in settlements and commercial areas, and passes intensively used farmland. On the other side there

are sections crossing dense forests and passing remnants of old cultural landscapes including different highlights (Rohler 2011). The route has been realized mainly on existing lanes and streets and is closely linked to the net of routes and projects in the Regional Park. It is planned that new projects of the Regional Park in the next decades will be realized mainly along the ring route (Dettmar 2012). But this will not be enough to anchor the Regional Park in the consciousness of the people.

The new focus therefore aims for much greater encouragement of individual activities in the Regional Park. This strategy focuses on traditional actors like farmers as well as new actors from diverse groups of the population who could become supporters of the Regional Park. The tasks of the Regional Park umbrella organisation are changing towards a "moderation of urban landscape" and the support of actor networks. It is necessary to explore potential and interests in activities in the Regional Park, especially near the ring route, which have not yet been identified and made use of by the Regional Park. The plan is to coordinate available areas, event ideas, desired land use, and the interested parties, in order to create the required communication platform for the Regional Park (Dettmar 2012).
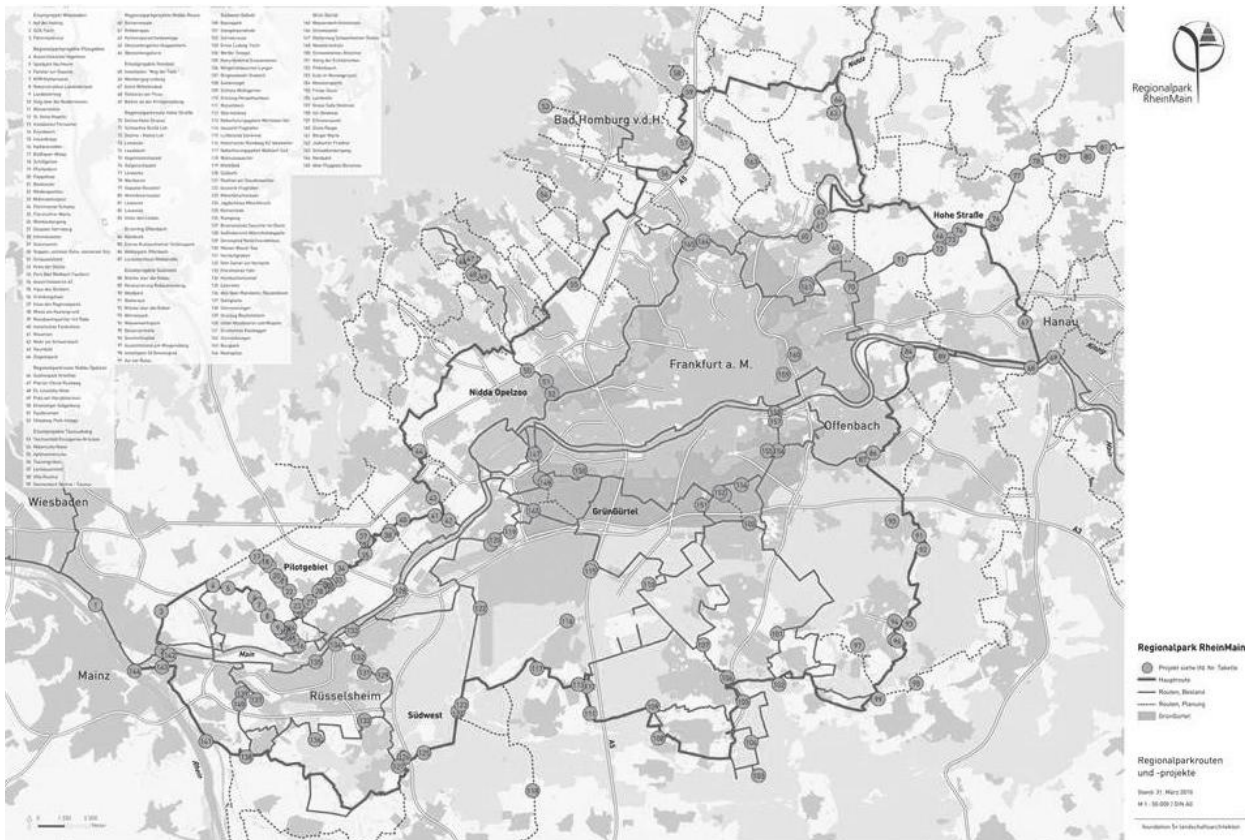
FIGURE 4 Regional Park RheinMain—Routes and projects, 2010
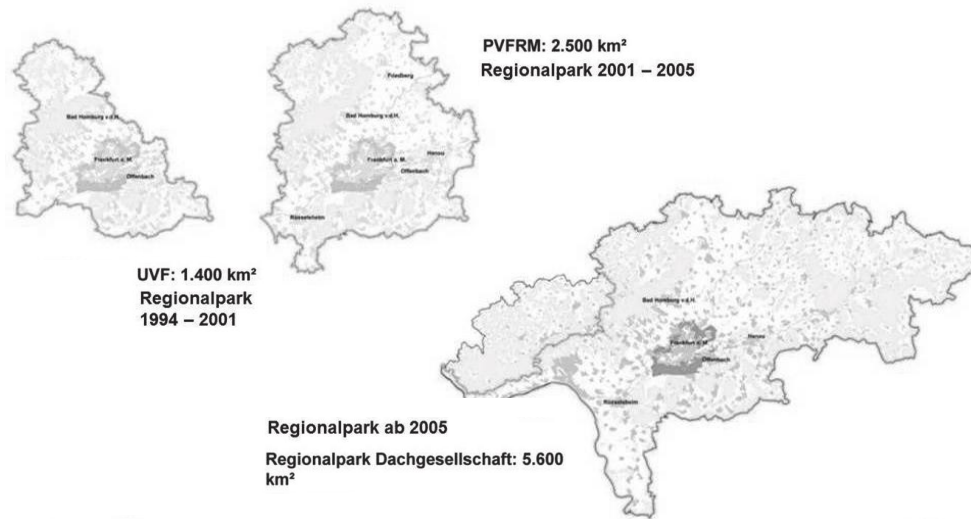
FIGURE 3 Development of the integrated area of the Regional Park RheinMain since 1994

FIGURE 5 Urban landscape within the Regional Park RheinMain

FIGURE 6 Experience point of the regional agriculture within the Regional Park RheinMain

One step in this new orientation was the start of an intensive collaboration with the regional farmers. It was possible to establish new forms of cooperation especially with those who do farming close to the ring route. The Regional Park changed in the perception of these farmers. In the past it had been seen sometimes as a disturbing or threatening element for the regular agriculture production. The new perspective is that the Regional Park can offer a platform for some of the products and services of the farmers (http://www.land-partie.de/de/landwirtschaft-und-lernen.aspx?categoryId=169). Farm shops, restaurants, events, and other offers by the farmers are now advertised on the Regional Park website (www.regionalpark-rheinmain.de/de/zu-gast-bei-hofe.aspx). In the summer 2012, a "Regional Park summer" with various activities was organized on farms along the ring route [**FIGURE 6**].

Compared to this, it is much more difficult to gain new groups of the population for an active engagement in the Regional Park. There are already a lot of recreational activities like biking, hiking, or jogging on the routes. Like other public services this is seen as a self-evident infrastructure, which does not need any kind of additional support. The question is how to win new actors and encourage new activities in the landscape.

For some sections of the ring route a research was started to find out if there are already informal or undiscovered actions in the adjacent areas. This investigation was based on interviews with farmers and members of local authorities, sport associations, and nature reserve organizations. Additionally, an intensive Internet analysis about "informal activities" in these areas of the Regional Park was made. Social networks, chat rooms, and public photo databases like Flickr have been analyzed. Furthermore, the focus was concentrated on new media games, such as the popular geocaching and smart phone based games like "The Target."

The first result shows that there are a lot of activities in geocaching all over the Regional Park. Any further "alternative" activities are almost nonexistant in the area of the ring route. The ring route leads through peripheral urban areas of Frankfurt and other cities. The informal activities seem to be more present in the denser urban areas of Frankfurt, for example within the "Green Belt" of Frankfurt (Projektbüro Friedrich von Borries 2011).

The approaches being found will be evaluated more precisely and a contact to the involved persons will be organized. If they are interested in further action or fellow participants, the Regional Park organization could offer a platform on

their website. Beyond this the Regional Park organization will look for interested farmers who can offer spaces for temporary activities like picnics, smaller events, parties, or games, such as dragonfly or cross-field running. Maybe this will allow the creation of a growing network of people interested in supporting the Regional Park. This could be another step to an interactive platform for activities within the Regional Park.

How to involve the local people in the use, design, and maintenance of urban open spaces has been a heavily debated issue for many years. A range of projects are already underway in Germany (see for example Overmeyer 2013; Rada 2012; Ringkamp 2011; Essler 2012), but on the regional level there has been very little practical implementation. The Regional Park RheinMain tries to make the first steps in this direction.

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LANDSCHAFTSZUG DESSAU—
AN EMERGING COLLABORATIVE LANDSCAPE

SIGRUN LANGNER
Bauhaus University, Weimar, Landscape Architecture and Planning, Germany
sigrun.langner@uni-weimar.de

Sigrun Langner is a registered landscape architect and graduated from the Technical University in Berlin in 2003. She has since been a partner at the Leipzig-based office, Station C23—architecture landscape urbanism. Between 2005 and 2012 she taught at the University of Hanover, in the Landscape Architecture Department. She is a member of Studio Urbane Landschaften—a transdisciplinary network for research, teaching, and practical work. In 2012 she completed a Dr.-Ing. at Leibniz University Hanover. Her research interest is the potential of a design-oriented cartography for large-scale landscape design. Since 2013 she has been a junior professor for landscape architecture and landscape planning at the Bauhaus University in Weimar.

shrinking regions / context-, process-, and dialogue-oriented design

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INTRODUCTION—NAVIGATING IN URBAN LANDSCAPES

Designing in urban landscapes can be analogized to navigating in rough seas. The complexity of today's urban landscapes requires a design methodology that is able to correlate on existing interrelations and which advances in many small and reflexive degrees. The metaphor of "navigation" helps to describe such "correlative" and "tactile" design techniques in large-scale landscape design in more detail and precision. (Langner 2013). Such a design approach requires context-, process-, and dialogue-oriented design skills. Context-oriented design starts from the existing, and is in search for new "possibilities within the existing" (Bormann et al. 2005, 88). Examining the existing structures and networks of local actors is essential for the reading of urban landscapes, visualising interdependencies, and the processes that shape urban landscapes. Process-oriented design involves the inclusion of processes that create and shape landscapes in a designed manner, as well as open-ended approaches regarding the unpredictability of such processes (Prominski 2011). Dialogue-oriented design is about outlining and organising communication processes in order to negotiate urban landscapes. A substantial qualification of urban

FIGURE 1 Former rail yard area hosts a cycling club, which has been allowed to occupy a part of the land for a BMX dirt track and contains experimental fields that enable evaluation of different ways of extensive green for difficult soil conditions. (Photo: Matthias Möller)
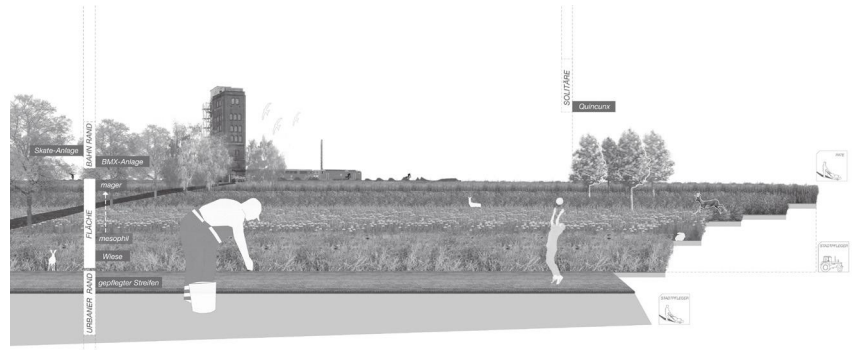
FIGURE 2 Proposed landscapes (Station C23)

landscapes can only be achieved through "multi-layered communication processes" (Sieverts 2008, 258). Designers must develop an awareness of the fact that they are part of a network of various, sometimes contradictory interests. The role of the designer is changing. Landscape architects, architects, and urbanists are no longer avant-garde, defining, and regulating ideas and spatial order, but they are themselves part of this societal negotiation process of spatial development (Bormann et al. 2005, 88).

FOR EXAMPLE: LANDSCHAFTSZUG DESSAU

The example of the "Dessau landscape stretch" shows how collaboration of different actors, and the inclusion of social and ecological processes in the design work allows for a new collaborative landscape to emerge over time (Adam 2009; Langner 2010; Per u. Mozas 2011).

The introduction of landscape processes and actors into design a necessary approach especially for shrinking regions (Wiens 2010). Designing with ongoing processes and qualification by "transforming the existing" (Sieverts 2004, 12) is a mandatory technique under conditions of limited resources.

The city of Dessau's population is shrinking: compared to the situation of 1990, in 2009 it had lost approximately 30 percent of its former 101,000 inhabitants. Consequently,

the city administration developed an alternative model for its further urban development. Revitalizing its core urban area, the concept of "urban cores and landscape zones" was introduced. This concept enables redevelopment of specific urban zones, while extensive landscape corridors are developed in the spaces in between the cores. The intention is to create here the image of a "cultivated, wide open landscape": a landscape extensively maintained and "taken into cultivation" by different actors. First parts of this long-range urban development strategy have been implemented during the IBA Stadtumbau 2010 (Stadt Dessau-Roßlau, 2010) [FIGURE 1]. In order to deal with the uncertainties of a long-term transformation process, a process-oriented development concept was necessary.[1] The challenge was the unpredictable nature of the shrinking process, the long-term horizon of the project, the involving of a large number of actors, and the limited financial resources for constructing and maintaining the new urban landscape. The main intention of this concept is to set a frame for the development process of the newly emerging landscape. This development concept combines design principles with maintenance strategies, possibilities of occupation by citizens, and ecological process.

Three main subjects have been determined for describing development strategies in the concept:
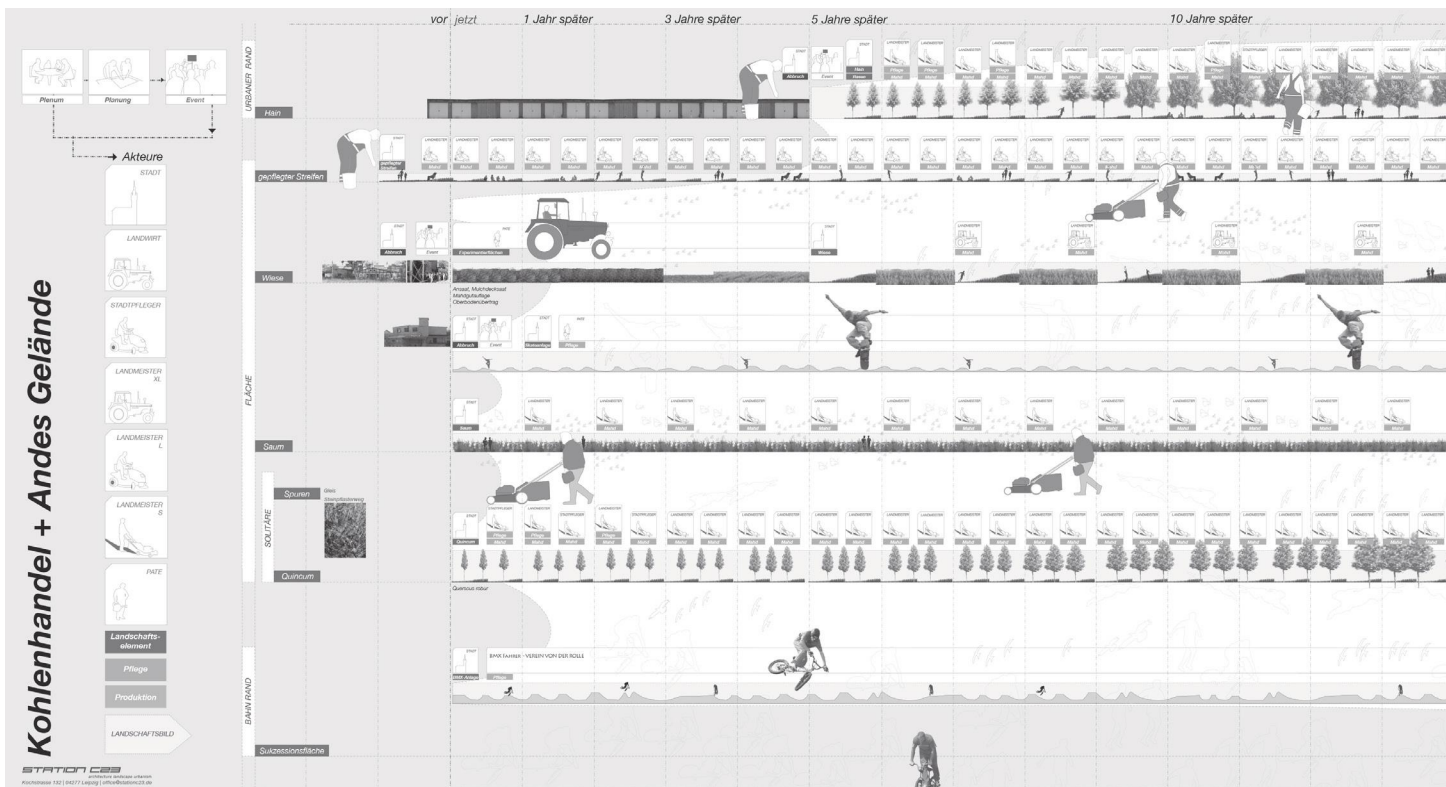
FIGURE 3 Development scheme—the spatial image of the landscape stretch will develop out of the interplay of spatial design elements, vegetative dynamics, and usage and maintenance by different actors, over a long time and with its own and unforeseeable dynamic and change. (Station C23)

First, there are aspects of maintenance and participation. For maintenance of the transforming areas there are three basic strategies, which each include a range of different actors. Small-scale intensive maintenance is carried out by the municipality in landscapes close to inhabited neighbourhoods, along infrastructures, and near edges of the urban cores. These areas represent the more intensive part of the new landscapes, containing the more fixed objects. Conversely, the relatively large open areas are extensive in character and determined by ecological processes. Extensive larger scale maintenance by farmers is intended on the joined large meadowlands. Thirdly, citizens are allowed to occupy pieces of land in the landscape zones by so-called "claims." In this manner, farmers and citizens become co-producers of urban open spaces. The landscape design provides options for public "occupation" and a process-driven open space development [FIGURE 2 + 3].

Second, natural conditions and the ecological processes they induce take up a key position in the project. This involves looking at surface- and groundwater-regimes, soil, specific vegetation, and so on. The main intention is to work with the site conditions and not against them. In both intensive and extensive landscape elements, appropriate vegetation typologies are selected especially adapted for the existing conditions. For instance, specially assorted seed mixtures for

grasslands have been fine-tuned in order to establish optimal on difficult soil conditions. This reduces building costs and maintenance requirements, but also aims to realize ecological and aesthetic rich ambitions (Felinks et al. 2011, 50).

The third issue is to connect to the cultural resources of the region, more specifically the historical background of the Dessau-Wörlitz Garden Realm. Referring to this, the present urban redevelopment follows the idea of "bringing the garden realm into the city," an idea developed by the city and the IBA in a process of participation. Spatial elements of the garden realm are identified, re-interpreted, and adopted as a design-vocabulary for the landscape stretch. This includes various landscape elements, forming a framework of paths and traversals, tree-marked entrances, views, focal points, traces of former uses, and characteristic groups of oak. This spatial framework structures the emerging open spaces in the landscape zones and is the foundation for a process of collaborative landscape production [FIGURE 1].

CONCLUSION—A DESIGNED FRAME FOR AN EMERGING COLLABORATIVE LANDSCAPE

Since landscape has basically a dynamic character, the task for landscape architects is merely to "orchestrate the agencies of the landscape" (Prominski 2011, 185). This requires developing methodologies to integrate the interplay of
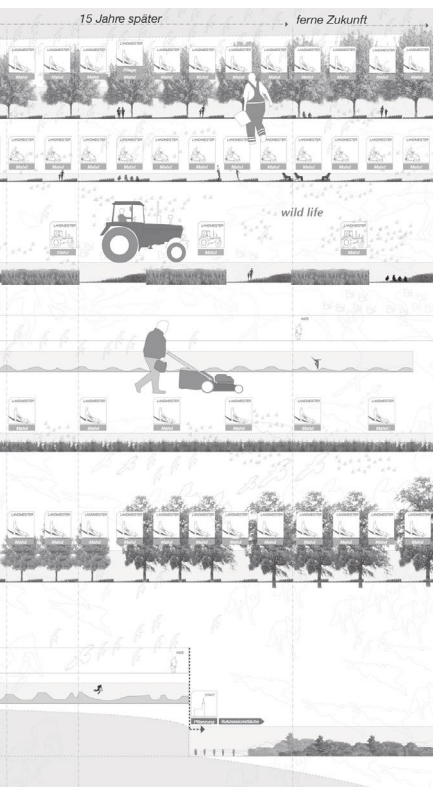
FIGURE 4 Dessau Landschaftszug. A chain of landscape zones connecting fluvial landscapes with new and existing green spaces (Station C23)

ecological and social processes into design processes. Casting all design elements into one fixed image is not an option within such a design approach.

The image of the Dessau Landschaftszug is emerging through the collaboration of the different actors, and it is shaped over time by social and ecological processes. The designer is not the self-evident dominant force, being now a part of a co-operative process. Alliances between citizens, politicians, landscape architects, engineers, farmers, and others are constantly initiated and provoked through rebuilding the landscape.

Collaborative landscape needs designs with spatial and temporal flexibility, capable of change and interaction. Spatial design provides a frame for a process-oriented and dialogue-oriented landscape development. Although the precise processes might be unpredictable, it appears to be possible to design concepts that seriously engage themselves with the flux of multiple interactions and landscape production at various scales over extended periods of time (Langner 2010).

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COMMUNICATING NATURE VALUES IN URBAN GREEN STRUCTURE PLANNING. CASE STUDIES FROM NORWAY

KINE HALVORSEN THORÉN
Norwegian University of Life Sciences (UMB), Department of Landscape Architecture and Spatial Planning, Norway
kine.thoren@nmbu.no

Professor Dr. scient Kine Halvorsen Thorén is a landscape architect teaching studio courses on urban issues. Thorén's research focuses on densification versus nature diversity and physical activity/use of neighborhoods.

INGER-LISE SAGLIE
Norwegian University of Life Sciences (UMB), Department of Landscape Architecture and Spatial Planning, Norway
inger-lise.saglie@nmbu.no

Inger-Lise Saglie is a professor in urban and regional planning. She is educated as an architect from Norwegian University of Science and Technology and holds her doctoral degree from Oslo School of Architecture. Her research interests include urban sustainable development, planning theory, environment and planning.

green structure / nature values / knowledge in planning / framing

INTRODUCTION

According to the Norwegian environmental authorities the compact city model, which has obtained hegemonic status in our country, is dependent on well functioning blue and green infrastructures (Norwegian Ministry of the Environment 2012). Such areas are assigned a range of values and functions including safeguarding local climate conditions, managing flooding, and not least in the interest of human health and quality of life. It is today also much more awareness about safeguarding natural diversity. Thus one important question arises about what kind of nature and what kind of knowledge base is needed to safeguard the different values and functions mentioned above.

The Norwegian Ministry of the Environment is also concerned with the knowledge base and the report *Norway's Environmental Targets* states that, "Research and monitoring provide us with a sound knowledge of the environment, which is the foundation for our knowledge-based environmental management regime." (Norwegian Ministry of the Environment 2012, 50). The report underlines knowledge about the population status of species, the range of and ecological status of habitat types, and the impact of environmental pressures.

The theme has received increased attention from central authorities as a result of introducing the Biodiversity Act in 2009 and today it is a strong focus on national values and international commitments. Currently it appears to give less attention to the other values and functions referred to earlier. These are issues that must be dealt with largely at the local level in the municipalities. The aim of our presentation is, therefore, to investigate what values are attached to nature and are included in Norwegian green structure planning at local level, and how this affects the plans.

METHODS AND THEORETICAL APPROACH

The article is based on comparative case studies in two Norwegian cities, Oslo (the capital) and Trondheim (the third largest city). By Norwegian standards Oslo as well as Trondheim must be regarded as pioneers in this field, and in line with Bent Flyvbjerg (2001) characterized as best cases and thus instructive examples. Both municipalities have long traditions of green structure planning and are concerned with nature diversity and multi-functional green infrastructure. We have investigated current green plans, municipal plans, and reports to these plans and also consultative statements. The study is part of a larger ongoing interdisciplinary research project "Handling goal-conflicts in compact city/ center development," (SUSPLAN) funded by The Research Council of Norway.

To analyze the cases we have used a four-step model based on Jane Hunt and Simon Shackley (1999) (1) Which framings or concepts are embedded in nature diversity values in the green structure plans? (2) What kind of nature knowledge base are the plans built upon? (3) To which extent is the knowledge base translated into useful knowledge for planners? (4) To which extent has bureaucratic norms affected the knowledge base used by planners? Since green structure planning involves so many disciplines from biology to engineering, hydrology, urban planning, landscape architecture, and so on, views on framing nature and natural values may vary widely. This may consequently result in completely different understandings of what constitutes valid knowledge.

MAIN FINDINGS

One of our main findings is that having a clear concept for how nature values are communicated seems to be essential for the physical footprint in the plan and also for the way and what kind of knowledge is brought into the planning process. Unlike in Trondheim, Oslo's green plan is an example of this. Ever since the city's first municipal plan of 1929 the city's green spaces are described as a park system, a term that provides clear images in peoples' minds. The whole system is captured in one word: park system. The concept is further developed and is presented today as Oslo's blue-green structure in which its multifunctional role is of particular importance. In the last green plan the ideas are framed by means of conceptual sketches illustrating the various values and functions in a straightforward manner. It is this ability of non-verbal communication that the theorist of planning, A. Faludi (1996) emphasizes as architects' and urban planners' specific expertise in planning. Trondheim does not have the same image-related way to present their green system.

CONCLUSION

The strength of the Oslo plan is that it is possible to recognize the park system concept even in the spatial plan. In spite of this, we have revealed that the Oslo plan to the same extent as the Trondheim plan has shortcomings because it is unclear how basic knowledge of urban nature is analyzed and prioritized and what the urban blue and green areas are supposed to be. It is in other words a need for methodological development. Nevertheless, we believe that our findings have revealed the significance of the framing stage in the planning process and how framing by using images can help to visualize what one is looking for.

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A MULTIFUNCTIONAL ANALYSIS OF OPEN SPACE OWNERSHIP AND USE IN THE CITY OF VANCOUVER, CANADA

ELIZABETH BRABEC
*University of Massachusetts Amherst,
Department of Landscape Architecture
and Regional Planning, USA
ebrabec@larp.umass.edu*

Elizabeth Brabec is a professor and former Department Head of the Department of Landscape Architecture and Environmental Planning at the University of Massachusetts Amherst. With a Master in Landscape Architecture from the University of Guelph, Canada, and a Juris Doctor from the University of Maryland, she founded and managed the landscape planning firm, Land Ethics, Inc. in Washington, D.C. and Annapolis, Maryland. She has also taught and held administrative positions at the University of Michigan, School of Natural Resources and the Environment, and Utah State University, Department of Landscape Architecture and Environmental Planning. Her research interests are focused on land conservation and the design and planning of sustainable open space, complemented with a strong interest in culture and the historical basis of landscape form.

*open space planning / green infrastructure / urban greening /
open space development regulation*

INTRODUCTION

Vancouver is perhaps the most cited example of sustainable development in North America. *The Economist* rated the city number one in the world for livability in 2011, as it had over the previous five years (Gulliver 2011). With the city's focus on quality design and planning, it has developed a strong following of advocates for its planning, design, and public participation policies (McAfee 1997; Punter 2003; Berlowitz 2005; Timmer and Seymoar 2005; Harcourt, Cameron, et al. 2007). However, as with any such widely acclaimed models, Vancouver also has its detractors. Lack of affordable housing and congestion top the list of issues (Tomalty 2002; Boddy 2006). The city's current focus on being "green" and sustainable have arguably been efforts to at least deal with the issues of congestion. It is then somewhat surprising that with all of the attention paid to planning and growth management in the city, there has not been a comprehensive analysis conducted of the city's urban open space and the role it plays in the city's livability and overall claim to sustainability.

The provision of open space in urban settings, whether public or private, has a long history in urban design. The creation
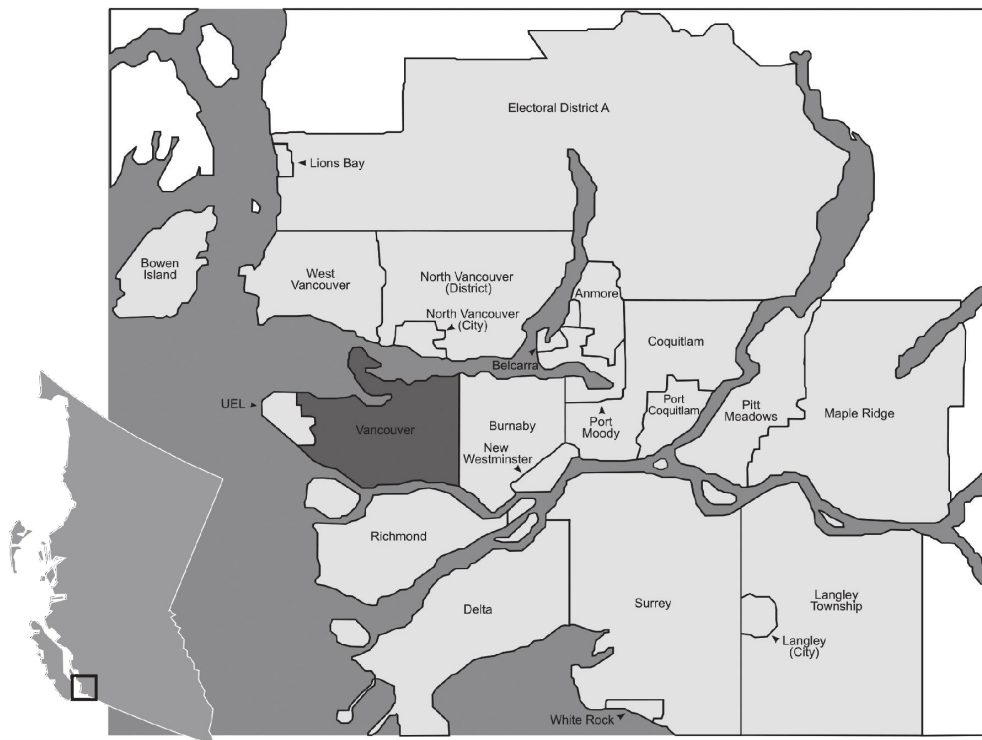
FIGURE 1 Map of the context of the city of Vancouver, showing the province of British Columbia in green to the left, and the city proper in red, surrounded by the municipalities making up the Greater Vancouver region.

of urban open space in the form of patches of public or semi-public parkland, dates from the mid-1800s as the Industrial Revolution began to condense population in cities. As population numbers and their density increased in cities, health issues related to overcrowding and poor sanitation came to the fore. This was exacerbated by the long hours that workers were required to spend in factories under largely unhealthy conditions. The parks movement of the late 1800s and early 1900s was a reaction to these developments, as a way to provide light and air to city residents, and access to recreation space during their limited free time. Changes to the goals of urban open space followed changes in society, with the post-World War II development boom followed quickly by the environmental movement of the nineteen-seventies. This resulted in a focus on ecology, environmental quality and the provision of sufficient habitat in urban parks. The nineteen-eighties and nineteen-nineties saw an awareness of the need for watershed management, even in urban areas. Urban open space expanded its list of functions again, along with its forms to include a variety of best management practices for protecting both water quality and quantity within the urban system. The 2000s saw resurgence in interest in food production and food security, resulting in the increasing demand for land for community gardens, allotment gardens, and commercial production. In addition to these goals

for open space use, during the past two decades, urban open space has been seen as a critical aspect of urban livability, with its positive impacts on psychological and physical health. This led to an emphasis on opportunities for passive recreation and visual access to green spaces to reduce stress and its resulting health effects in city residents.

More recently, particularly with the focus on global warming and climate change, the issues of urban open space have broadened again, bringing green infrastructure to the forefront. Ecosystem, stormwater management, heat island mitigation, and food security have become a part of the dialogue surrounding open space planning, particularly to address the questions of climate change adaptation and resilience. Therefore, more recent open space or green infrastructure planning and design has included alternative functions to recreation, at a variety of scales for urban greening that are more detailed than most considerations of open space systems from the large scale of regional parks to the small scale of a green roof.

Given this context for open space and green infrastructure, this paper looks at open space in Vancouver from two points of view: first the types of open space and green infrastructure the city has created during different time periods, and second, the functions they fill. At the level of scale, the study spans the spectrum of green infrastructure from large
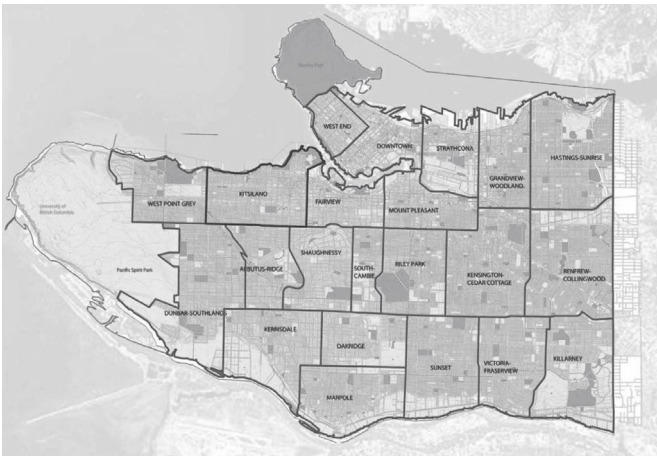
FIGURE 3 Map of the city of Vancouver proper, highlighting its twenty-two neighborhoods. This study focuses on the six neighborhoods that comprise the downtown core, and that have seen the highest levels of development in the past twenty years: the West End, Downtown, Strathcona, Mount Pleasant, Fairview, and Kitsilano.

FIGURE 4 Map of the park lands in the city. The patch design is indicative of the legacy of park planning from the 1930 plan.

regional patches such as Stanley Park, to neighborhood parks, to site scale analysis including the presence of green roofs, green walls, and small scale stormwater biosystems. The success (and failure in some respects) of the city to save and create open space and green infrastructure provides a case study that is instructive to other cities in both Canada and the United States.

THE CREATION OF A TYPOLOGY OF OPEN SPACE

Initially incorporated as a city in 1866, the city of Vancouver and its metropolitan region [FIGURE 1] developed steadily during its first century. Population size and density began to increase quickly and intensively particularly during the latter part of the twentieth century. By the late eighties, the pace of growth had increased dramatically, and the city began to develop the dense urban core that is its hallmark today [FIGURE 2]. Physically constrained by it's location between the mountains and the sea, the lack of developable
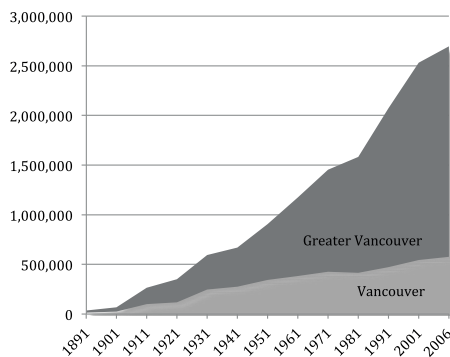
FIGURE 2 Population growth in the city and the Greater Vancouver region between 1891 and 2006 (City of Vancouver 2006).

land has always been a factor in the efforts of the city and region to plan for its future. Therefore the balancing of the demands for farmland in the periphery, along with the increasing population and their goals for a livable city has resulted in a focus on incorporating green space in the city, particularly the areas of the downtown core and its surrounding neighborhoods [FIGURE 3].

Vancouver's first Master Plan was adopted in 1930. A classic example of the City Beautiful tradition, the plan included the development of monumental public spaces and buildings. A citywide network of parks and open space was envisioned in the plan, and was largely realized as a series of patches of neighborhood parks, regional parks (including Stanley Park), and connecting pleasure drives throughout the city [FIGURE 4]. The pleasure drives were designed with street trees lining either side, providing a significant amount of green canopy to the city [FIGURE 5]. The vision was to create a livable city: "A city of a million inhabitants with such a system of public grounds provided for the use of the people would be a healthy city, a happy city, one in which people would be proud to live."

The plan clearly built on the strengths of the existing city, since photos taken between 1913 and 1939 show a city with a heavily industrialized waterfront, but one that also had green commercial and industrial neighborhoods throughout downtown and residential neighborhoods to the south [FIGURE 6]. Although primarily focused on both active and passive recreational uses, the Plan also mentions the benefits of wildlife habitat and visual quality. Although the goals of visual quality were realized, the provision of habitat in these early parks was rather meager.

By 1960, both the city and the region were experiencing strong growth, and in response, the first official plan for the

SCALE OF CROSS SECTIONS
10 5 0 5 10 15 20 25 30
ONE INCH EQUALS TEN FEET
1922

SUGGESTED CROSS SECTIONS OF PLEASURE DRIVES
- VANCOUVER - B.C.-

HARLAND BARTHOLOMEW
CITY PLAN ENGINEER

SINGLE ROADWAY BOULEVARDS
SIX LINES

A BUILDING SET BACK OF 30 FEET OR MORE ADDS GREATLY TO THE DIGNITY OF THE STREET - PROPER TREE PLANTING WILL GIVE IT CHARACTER.

THE FOUR LINE BOULEVARD CAN BE REDUCED TO A MINIMUM OF 80 FEET IF NECESSARY BUT THIS WIDTH DOES NOT PROVIDE FOR A FIRST-CLASS TREE PLANTING

DOUBLE ROADWAY BOULEVARDS

EIGHT LINES

SIX LINES

FOUR LINES

THE CENTER STRIP OF DOUBLE ROADWAY BOULEVARDS SHOULD BE GENEROUS A THOROUGHFARE OF THIS TYPE SHOULD NOT BE LESS THAN 100 FEET WIDE

DOUBLE ROADWAY BOULEVARDS WITH STREET CAR LINE

EIGHT LINES

SIX LINES

SIX LINES

IF STREET CARS ARE TO BE AC-COMODATED ON A DOUBLE ROAD-WAY BOULEVARD THEY SHOULD BE IN THE CENTER STRIP AND OBSCURED BY PLANTING

TRIPLE ROADWAY BOULEVARDS

THE NATURALISTIC PARKWAY

NOTE ARRANGEMENT OF LOTS TO TAKE ADVANTAGE OF PARKWAY.

LOTS SHOULD ALL FACE PARKWAY AT RIGHT ANGLES TO STREET LINE.

Page 208

Plate 49

FIGURE 5 The 1930 plan for pleasure drives throughout the city included street trees along roads and in residential yards, and open space for naturalistic parkways (Harland Bartholomew and Associates 1930, 208).
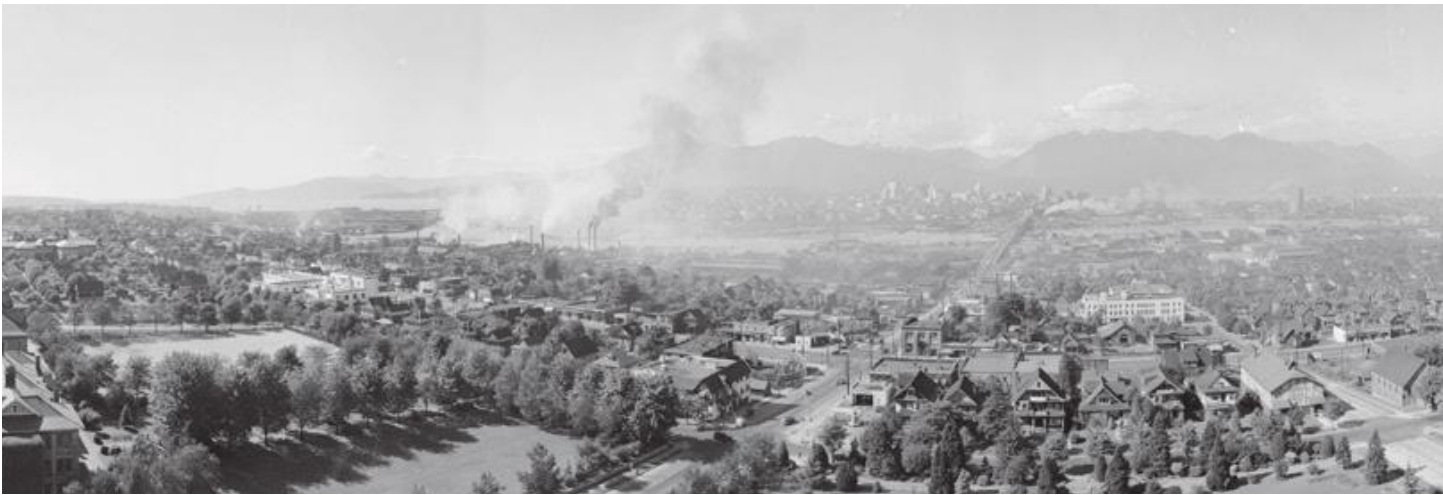
FIGURE 6 View of Fairview and Mount Pleasant from the roof of City Hall at 12th Street and Cambie in 1939. Notice the abundance of trees and a park in the foreground. (Moore 1939)

entire metropolitan region was adopted in 1966. The first report to come out of this regional planning effort was "The Livable Region" which outlined a five-part strategy for managing growth. This was followed in 1980 by an official regional plan that focused on land use and transportation. By the late eighties, the severe growth pressures in the Vancouver region forced the creation of a new regional plan in 1990 called "Creating our Future: Steps to a More Livable Region." This plan included a significant focus on the provision of open space in the region and in the urban core of the city. Within this regional context and focus on green infrastructure and open space, the city developed a strong focus on the provision of open space in the developing core of the city. As downtown and West End became increasingly dense, the city required new development and redevelopment of existing sites to provide open space for the area's residents. This approach originated in the late nineteen-fifties, when city planners began to encourage the building of high-rise residential towers in Vancouver's West End. They enacted strict requirements for setbacks and open space to protect sight lines and preserve green space. The approach was later codified in the late seventies in area plans for the redevelopment of former industrial waterfront sites in False Creek and Coal Harbour. In the 20 years between 1985 and 2005, 12 development projects created more than 91 acres of parkland, averaging 577 people per acre of park in these very dense neighborhoods. More recently, the city has adopted a "Green City" plan, with the goal of making Vancouver the greenest city in the world by 2020. It is based on an approach called "ecodensity" which focuses on the ways in which "density, design, and land use can contribute to environmental sustainability, affordability, and livability." While the plan focuses primarily on parkland for recreation

and habitat, recently adopted area development plans for areas such as Southeast False Creek are the first indications that surface water quality and stormwater management are recognized in open space planning.

OPEN SPACE OWNERSHIP AND USE

Open space in the city can be categorized into eleven different types spanning public, semi-public and private ownerships [TABLE 2]. While the physical form of the spaces engenders constraints on their use, the study found that ownership of the spaces exerts a greater level of control on future uses, particularly in the current era of conflicting demands on open space uses. The development of semi-public open space associated with tower developments in the downtown neighborhoods has been particularly problematic. The development agreements and subsequent decisions of the homeowners' associations dictate both current and future uses in these areas, constraining future change. The various types of open space are identified in **TABLE 3**, along with their current and potential future uses under the broad headings of recreation, water budget maintenance, habitat provision, the creation of urban food systems, and heat island mitigation. The greatest potentials for expansion of uses can be found in neighborhood parks, street right of ways, and vacant land. Of these three, vacant land is the most ephemeral, since it's long-term use as open space, whether for community gardens, recreational areas or other uses, is dependent on ownership and rental tenure decisions.

Development	Year start to complete	Land area (acres)	Population 2006	Housing units 2006	Density FSR	Park area (acres)	Park % of site
Downtown Community:							
Concord Pacific Place	1990 to 2007	110	9,280	5,620	4.5	21.1	19
Downtown South	1991 to present	88	13,605	9,255	--	2+	2.3
Citygate	1992 to 2007	8	2,007	1,025	3.8	0**	
Coal Harbor and Bayshore Gardens	??? to 2006	48	3,661	2,325	4.5	8+	16.7
International Village	1990 to present	21	620	364	3.6	10.4	49.5
Triangle West	1996 to present	18	5,577	3,650	5.5	<1	5.6
Fairview Community:							
False Creek South	1976 to 1990	76	5,213	3,029	--	26	34.2
Portico	1993 to 2005	10	773	443	3.1	4	40.0
Kitsilano Community:							
Arbutus Neighborhood	1996 to present	24.7	2,700	1,724	2.4	2	8.1
Arbutus Ridge Community:							
Quilchena Park	2001 to 2005	12	1,586	681	1.4	0*	
Renfrew-Collingwood Community:							
Collingwood Village	1993 to 2007	27	4,423	2,372	3.4	7	25.9
Victoria-Fraserview / Killarney Community							
Fraserlands	1985 to 2000	65	3,350	1,930	0.95	10 +	15.4

TABLE 1 An overview of selected redevelopment projects in the City of Vancouver, detailing open space created (City of Vancouver Planning Department 2009a; City of Vancouver Planning Department 2009b; City of Vancouver Planning Department 2009c; City of Vancouver Planning Department 2009d; City of Vancouver Planning Department 2009e; City of Vancouver Planning Department 2009f; City of Vancouver Planning Department 2009g; City of Vancouver Planning Department 2009h; City of Vancouver Planning Department 2009i; City of Vancouver Planning Department 2009j; City of Vancouver Planning Department 2009k)

Ownership	Type
Public	regional park
	neighborhood park
	pocket park/plaza
	street right-of-way
	street verge, sidewalk
Semi-public	development terraces
	development parks
	community gardens
	allotment gardens
Private	yards
	roof gardens / green roofs

TABLE 2 A typology of ownership and open space types.

Type	Recreation	Water budget	Habitat	Food System	Heat Island Mitigation
Regional Parks	✔	✔	✔	✖	✔
Neighborhood Parks	✔	⊠	☑	⊠	✔
Development Terraces	✔	✖	⊠	⊠	☑
Street ROW	✔	⊠	⊠	☑	☑
Verge	☐	⊠	☑	☐	☐
Green Roofs/Walls	✔	✖	☑	⊠	☑
Vacant land	⊠	⊠	⊠	☑	⊠

✔ Current practice	☑ limited practice	⊠ Not currently	☐ needs redesign	✖ not possible or appropriate

TABLE 3 Analysis of the various types of open space in the city and their current and potential future uses.

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There are many examples of landscape architecture and environmental design all around us. At the same time, we move about in the virtual sphere of a set of unbuilt ideas, seeking orientation among a range of appealing models with their specific attitudes and intentions. The critical examination of "good professional practice," both past and present, is tied up with design academies and the history of their influence in landscape architecture. The search for inspirational educational institutions, for role models whose personality and attitudes impress others—the aim is to encourage people to regard the critical contemplation of specific landscape architecture academies as a topic for research.

What continuities and traditions define the classic repertoire of landscape architecture? What aspects reveal differences, where do innovative styles emerge? What fundamental changes in design teaching may be observed? What new developments are emerging or call for our attention? What aesthetic practices are necessary for the use and implementation of technical developments?

BEST PRACTICE LANDSCAPE ARCHITECTURE
FUNDAMENTALS

COMMENT BY UDO WEILACHER, MUNICH

Under the title "Fundamentals," four experts explained their approach to improve or better understand the label "best practice" in landscape architecture. On one hand, it is important to improve the academic education in landscape architecture worldwide in order to secure excellent professional progress, possibly by implementing more global guidance. On the other hand, it seems to be necessary to understand a lot better, how landscape architecture can gain more public appreciation without risking to lose distinctive design qualities for the sake of popularity in the mass media. Looking at current international magazines about landscape architecture, it seems as if the specific, sometimes rather inconspicuous qualities of each single landscape project are not being paid enough attention. Instead, there seems to be an international trend to "sell a product" or to coin new professional buzzwords rather than telling individual stories or explaining specific design processes, which might not necessarily result in a best-selling product, but perhaps in a specific solution for an individual site.

UDO WEILACHER

is professor of Landscape Architecture and Industrial Landscapes, Department of Architecture at Technical University of Munich. He holds a PhD from ETH Zürich. From 2006–2008 he was Dean of the Faculty of Architecture and Landscape Sciences at Leibnitz University Hannover.

SIMON BELL (from the Estonian University of Life Sciences, Estonia) showed, in his presentation, how the ECLAS Guidance on Landscape Architecture was recently applied to the Eastern Baltic Network of Landscape Architecture Schools (EBANELAS)—a regional network of departments or schools in the Eastern Baltic region (Estonia, Latvia, Lithuania, Finland, and Russia with mentoring from Sweden). It is the first time the Guidance has been used for teaching program analysis. Simon Bell pointed out that it is a useful experience from which can a great deal can be learned. Other than expected, Bell explained that Guidance is not aiming at a rigid standardization of teaching strategies. It is, rather, a helpful tool for assuring that new programs in landscape architecture are not losing their credibility in the booster phase on an international level. The true success of this tool has to be evaluated in the future.

RHYS DANIEL WILLIAMS (from the RMIT University, Australia) focused on "Disseminating Landscape Architectural Specificity on the Global Stage." He states that, "realized landscape projects can be understood as repositories of disciplinary knowledge. They embody specific information about landscape architecture's physical manifestation, mutability, and operation." The most important questions as to how effectively landscape architectural specificities are represented in international publications and what are the effects of this global dissemination, are at the center of this research project. Williams aims to devise qualitative methods for evidencing landscape architectural practice in order to raise awareness of disciplinary technique and improve design methods. This is being explored through an examination of the relationship between the concepts "best practice" and "precedent" in the context of publishing. "The findings … will determine

the scope of an ethnography of how designers use precedents in the process of producing novel designs," Williams promises. Since the extensive research is still in progress, we are looking forward to Williams's future findings.

ISUN (AISAN) KAZERANI (from the University of Melbourne, Australia) presented a strategy to create fusion of design practice and theory and bridge the notion of "place" and "site" by exploring possibilities for engaging place experience in site design, through investigation of well-acclaimed harbor foreshore design projects. The investigation aims to create a less deterministic and more experiential understanding, which is useful for inspiring both a designer's site-thinking during the design process, as well as the product for an enriched user experience of place.

KARSTEN JØRGENSEN (from Norwegian University of Life Sciences, Norway) delivered an interesting talk about "The Fabrication of Heroes in Landscape Architecture." As a conclusion, he suggested a typology of mechanisms involved in the process of fabricating role models or heroes in landscape architecture. At the same time, he emphasized the role of critique in landscape architecture, and stressed the responsibility of teachers and researchers to develop research on contemporary history, and to include a program of analysis and critique of projects in the LA curriculums.

In a (too) short discussion at the end of the session, focusing on the key hypotheses of the different works, it became quite clear that there is a strong need in the profession for a better understanding of the processes needed to improve on how truly outstanding design projects in landscape architecture are promoted. It was criticized that the mechanisms in public relations and publications that lead to the fame of individual landscape architects and their works are not sufficiently understood, and can lead to either a superficial appreciation, if not total ignorance of other excellent landscape architecture projects worldwide. "Do we really need any heroes in landscape architecture?" Karsten Jørgensen was asked by the audience. "Yes, we do," was his answer at the end of this session. But it seems to be more important than ever to clarify what characterizes a "hero" in current landscape architecture from a professional point of view, and what do we mean precisely when we say a project is "best practice" or "truly outstanding"? A broad professional discussion especially in academic circles about these topics would be very helpful to reinforce the appreciation of landscape architecture in the international discussion about "Baukultur" (building culture) and the development of sustainable living environments.

APPLYING THE ECLAS GUIDANCE ON LANDSCAPE ARCHITECTURE: REFLECTIONS FROM RECENT EXPERIENCE IN THE EASTERN BALTIC SEA REGION

SIMON BELL
Estonian University of Life Sciences/ University of Edinburgh, Department of Landscape Architecture/ Edinburgh College of Art, OPENspace Research Centre, Estonia
simon.bell@emu.ee

Professor Simon Bell, PhD. Head of Department of Landscape Architecture, Estonian University of Life Sciences, Kreutzwaldi 58a, Tartu, Estonia and Associate Director, OPENspace Research Centre, Edinburgh College of Art, University of Edinburgh, Lauriston Place, Edinburgh. President of ECLAS.

Simon Bell is a forester and landscape architect with a special interest in landscape and forests, outdoor recreation, and the relationship of people to the outdoors. Publications include *Elements of Visual Design in the Landscape, Landscape: Pattern, Perception and Process, and Design for Outdoor Recreation* as well as other books, chapters, and academic papers.

curriculum development / tuning process

INTRODUCTION

In 2012 the Eastern Baltic Network of Landscape Architecture Schools (EBANELAS, www.ebanelas.org), the first such regional network, was established, loosely located within ECLAS. It is funded through the Nordplus program, which supports educational networks aimed at improving teaching at all educational levels. The project involves the development of networked activities among most of the schools of landscape architecture located in the Eastern Baltic region in Lithuania, Latvia, Estonia, and Finland, with Sweden as a supporting partner and Russia as a non-funded associated partner. The aim is to strengthen the teaching capacities of each school by cooperating in developmental activities designed to improve the quality and effectiveness of two main focus areas: curricula structure and content and teaching methods. The network is coordinated by the Estonian University of Life Sciences (EMU) and lasts for three years. It will produce documents and other materials, which will form the basis for future development and cooperation among the network partners, using mechanisms such as Erasmus teaching exchanges and the development of shared resources.

BACKGROUND/MOTIVATION FOR THE PROJECT

Landscape architecture is developing as a discipline but still institutionally and professionally weak in the Eastern Baltic region as a result of historical factors. Each country has one to three schools (departments) in universities (life science, agricultural, or technical) or universities of applied science. Student demand is quite strong but many programs are in the development phase, being quite new while the more established ones need modernization or updating and improved pedagogic techniques in order to raise the standards towards the norms found in equivalent departments across Europe. The partner university staff agreed that some pedagogic approaches are distinctly old-fashioned for a design discipline, for example, being too-much lecture-based with exams and with an insufficient amount of integrated planning or design studios, so that they need to be modernized. The staff numbers are quite low and their international experience varies, with some international staff members present in some institutions and not in others. The professional structures in each country also vary, mainly being rather small in numbers of professional practitioners and currently limited in scope of activity. Opportunities for practical experience may also be limited as a result. International student mobility is gradually increasing but hampered by language barriers in those programs where no English courses are taught, and sometimes by reputation. Students going abroad to study tend to outnumber students coming in, which means that a sense of isolation from the wider academic world is maintained to a greater or lesser extent. In addition, regional characteristics, ranging from climate and ecology to political history and economics, give a certain distinctiveness compared with the rest of Europe, so that it makes sense to work together as a regional grouping in order to help solve common problems.

COMPARATIVE ANALYSIS OF STUDY PROGRAMMES: THE TUNING APPROACH

The first task undertaken by the network has been to try to make a comparison of the study programs of each member department as a first step in identifying the locally specific character of each but also to help in the task of evaluating the strengths and weaknesses and looking for possibilities for improvement, cooperation, and shared teaching. The method chosen for this was to use the ECLAS Guidance on Landscape Architecture Education (ECLAS 2011).

The ECLAS Guidance document is an output of the Le:Notre Tuning project undertaken within the first Le:Notre Thematic Network Project (www.le-notre.org). This was part of the wider testing of the tuning approach supported by the European Commission Socrates program and coordinated by the universities of Deusto (Bilbao) and Groningen (Tuning Project 2005). A diverse number of subject fields took part in the first tuning round up to 2004 and then others joined, including landscape architecture.

The Tuning project addresses several of the Bologna action lines. More specifically, the project aimed at identifying points of reference for generic and subject-specific competences of first and second cycle graduates. Competences are described as points of reference for curriculum design and evaluation, not as straitjackets. They allow flexibility and autonomy in the construction of curricula. At the same time, they provide a common language for describing what curricula are aiming at. In the framework of the Tuning project a methodology has been designed to understand curricula and to make them comparable. Five lines of approach were chosen:

1) generic (general academic) competences
2) subject-specific competences
3) the role of ECTS as an accumulation system
4) approaches to learning, teaching, assessment and performance
5) the role of quality enhancement in the educational process (based on a system of an internal institutional quality culture)

Items 1, 2 and 4 will be discussed in this paper in the context of the EBANELAS experience to date.

Within the Le:Notre project landscape architecture was "tuned". In addition to the generic and subject specific competences used in the Tuning project as a whole an extra class, "core competences" was added. The framework of the Le:Notre working groups developed in the first Le:Notre project was used to describe the main areas of subject specific competences. It is worth reminding ourselves of the role of core competences in landscape architecture, which center on the process of intervention in landscapes. Two interdependent core competences of landscape architecture are, according the ECLAS Guidance:

A. Knowledge, skills, and understanding of planning, design, and management, to create new or conserve existing landscape situations.

B. Holistic knowledge and understanding of the nature of landscape and the ways in which it is perceived in time and space, and the pressures and driving forces to which landscapes are subjected. The interdependent nature of these two core competences means that the teaching and learning of both of them should be tightly integrated with one another. The integration of the two core competences takes place in the form of studio teaching.

The ECLAS Guidance recommends that roughly equal importance should be afforded to each of the core competences over the course of first and second cycle landscape architecture degree programs, with the result that about half of the time on the curriculum should be devoted to studio and project-based learning. The remaining 50% will aim to convey the (subject specific) competences necessary for an in-depth understanding of the landscape and the way

in which it is perceived by means of other forms of teaching, including lectures, seminars, and workshops.

Generic competences refer to knowledge, skills, and understanding that students acquire regardless of their particular area of study. These are often also referred to as transferable or "soft" skills. The ECLAS Guidance states that, generally speaking, landscape architecture degree programs are ideally placed to provide students with the opportunity to acquire and practice a wider range of generic competences as a result of the emphasis placed on project work. Generic competences were divided by the Tuning project into three categories: instrumental competences (i.e. capacity for analysis and synthesis), interpersonal competences, (i.e. critical and self critical abilities and teamwork), systemic competences, (i.e. capacity for applying knowledge into practice). The subject-specific competences defined by ECLAS were derived directly from the thematic working groups set up to define and describe the subject at the start of the Le:Notre project. These are:

- **Theory and Methodology in Landscape Architecture Planning, Design and Management**
  - Landscape Design, Landscape Planning, and Management
  - Urban Open Space Planning (and Policy)
  - Interpretation and Conservation/Management of Cultural Landscapes
  - Conservation/Management of Parks and Gardens
  - Planning/Design for Infrastructure Projects (and Landscape Impacts)

  Vegetation and Materials
  - Materials and Construction Techniques
  - Vegetation Establishment and Plant Materials

  Information Technology in Landscape Architecture

  Professional Practice of Landscape Architecture
  Landscape architecture teaching and learning is normally by a combination of:
  - Studio learning
  - Excursions (field trips)
  - Lectures and seminars
  - Practical work
  - Internship

The EBANELAS network members met to start the process of evaluating and comparing the programs from each school. In practice, carrying out a comparison and relating all the courses to the competences proved to be easier said than done. In order to do the comparison, an Excel spreadsheet was devised with rows for each course within a study program, divided between bachelor and master levels (1st and 2nd cycles) and columns divided into five main sections: core competences, generic competences, subject specific

competences, teaching methods, and assessment methods, with separate columns within each section for each element. The ECTS for each course were noted in another column. The first problem arose because in each school there are many courses that do not fall into the category of core or subject specific competences as defined by the ECLAS Guidance, even though the subject specific competences are supposed to constitute some 50% of each program. These subjects are ones such as geology, soil science, ecology, silviculture, hydrology, and so on, basic subjects which are important but are also shared with and frequently taught alongside students in many other programs. As a result it was decided to name them as "Foundation, Background, and Supporting Competences." We considered that the proportion of these in a program might vary and affect the structure and quality of the program as a whole, for instance if they constituted too big a proportion to the exclusion of achieving the core competences. The generic competences gained from each of these would be identified however, as well as the mode of teaching and assessment.

The second problem was how to divide up the different subject specific competences achieved by large integrated courses such as are the norm in SLU Uppsala. Here the block teaching is based around a large project with associated lectures and seminars aimed at integrating a number of areas but with no division of ECTS among them. This problem to some extent occurs even with smaller courses elsewhere. The third problem was how to record the presence or absence of competences—especially the generic ones where no ECTS can be associated with them. As a solution it was decided to record 1 for presence and 0 for absence, then the overall balance between these achieved across a program could be identified even if it was somewhat approximate. The same issue arose with the subject specific competences and the core competences so the same notation was used. Clearly it is possible for a single studio program to teach one or both core competences plus several subject specific competences. The 1 and 0 scores could then be weighted against the ECTS for each to determine the balances, especially the recommended proportions of core competences achieved.

The spreadsheet was pilot tested using five typical course types: a design course, a plants course, a construction course, a history course, and a computer graphics course, by each partner. Naturally the names and content of the courses varied but it proved possible to fill out the sheet, although a few refinements were needed. Then the staff of each department got together and went through their program in detail, filling in as much of the spreadsheet as possible. On meeting, many questions arose as to how to do this— the degree of understanding among all staff varied so that the work had not been completed for each partner. The exact method of analysis using the statistical tools in Excel also proved to be difficult to decide owing to the range of

possible approaches and what might be possible and desirable for the project purposes. Thus at the time of writing the work continues. Nevertheless, it seems that we have devised a workable means of comparing programs, which with more experience and refinement as well as statistical help, should prove to be valuable.

CONCLUSIONS

The Tuning project and the ECLAS Guidance on Landscape Architecture Education form valuable and helpful tools for curriculum development and have been used for this in several countries. The experience so far of the Eastern Baltic Network of Landscape Architecture Schools, possibly the first attempt to use the guidance in comparison and evaluation has thrown up some conceptual issues such as the role of subjects which are not subject-specific to landscape architecture as well as practical problems associated with calculating the different proportions of subjects.
The idea behind Tuning being a means of harmonization rather than homogenization of the subject seems to work. The analysis method we have adopted means that the competences can be extracted from programs with quite different structures and combinations of subjects into a comparable format so that it should be possible for the equality of overall content and quality to be assessed while allowing for the diversity and identity of each individual school to be maintained.

ACKNOWLEDGMENTS

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RE-VISITING BEST PRACTICE:
INVESTIGATING PLACE EXPERIENCE IN THE NEXUS OF THEORY AND DESIGN

ISUN (AISAN) KAZERANI
*The University of Melbourne,
Faculty of Architecture, Building and
Planning, Australia*
aisank@pgrad.unimelb.edu.au

Isun (Aisan) Kazerani is a PhD
candidate in landscape architec-
ture/architecture. She has a diverse
background in architecture, fine
arts and geomatics engineering.
Her PhD topic involves exploration
of place experience in site-specific
design through implementation of
innovative multi-sensory techniques
in contemporary designed open
spaces. She has been teaching
design studios both in landscape
architecture and architecture, as well
as visual communication subject.

HEIKE RAHMANN
*The University of Melbourne,
Faculty of Architecture, Building
and Planning, Australia*
hrahmann@unimelb.edu.au

Dr. Heike Rahmann is a lecturer at
the Faculty of Architecture, Building
and Planning at the University of
Melbourne, VIC 3010, Australia. She
is a landscape architect and urban
researcher. She has a background in
landscape construction and worked
as a contractor before pursuing her
academic career. Her international
work experiences cover landscape
architectural and urban design
projects in Europe, Japan, and Aust-
ralia. In her research, Heike explores
contemporary issues in landscape
architecture and urbanism with focus
on design theories and practices. She
has worked on a number of projects
involving interviews with practitioners,
including her most recent project
about the contemporary landscape
architecture profession in Japan. She
also received awards from the German
Academic Exchange Service (DAAD),
the Japanese Government (MEXT) and
is currently a visiting research fellow
at the University of Tokyo's Institute of
Industrial Science.

*experiential critique / design process / place / site /
multi-sensory documentation*

INTRODUCTION

An extensive body of theoretical work in various disciplines
contributes to the ongoing discourse of place with different
interpretations of the relationship between the spatiality and
sociality of place (Lefebvre 1991; Relph 1993; Tuan 1977;
Norberg-Schulz 1998; Altman and Low 1992). Criticizing mod-
ern architecture for overlooking local identity and environ-
ment, most studies focus on a people-oriented definition that
overemphasizes the user in place definition. While a few
authors explore how specific design characteristics can create
"meaning" or "emotional belonging," others focus on improv-
ing the use and function of a site. However, most works add
limited value to the design process as they reduce the spatial
and conceptual complexity of site design to a series of repeti-
tive guidelines, which recommend specific spatial organi-
zation, the application of colors and textures, or the inclusion
of particular structural features or objects (Clements and
Dorminey 2011; Kaplan et al. 1998; Marcus and Francis 1997).
In contrast to the people-oriented conception few works focus
on the exploration of site as a material and conceptual space.
In such works, site goes beyond its locale or boundaries,

FIGURE 1 Ballast Point Park, McGregor Coxall
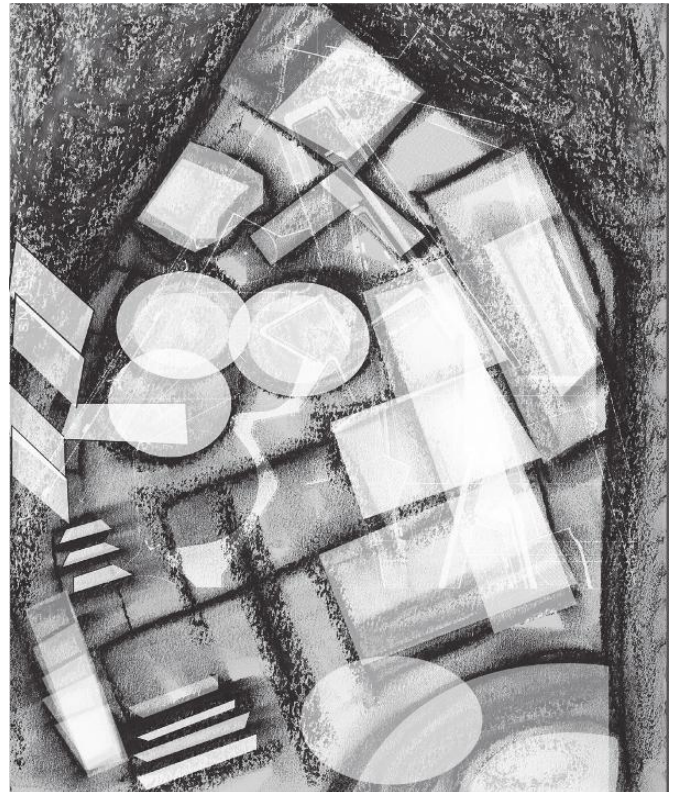
FIGURE 2 Landform experimentation may create a fuzzy site image but guides the user and encourages exploration

rather a dynamic relational construct, which is physically specific, but spatially and temporally expansive (Braae and Diedrich 2012). The spatial (built and unbuilt precondition) and conceptual (cultural, historical and ecological) complexities of a design project need to be experienced in relation to its existing status as well as the larger system to create a dialogue between the site's past, present, and future status (Burns and Kahn 2005). With the focus on the development of experiential qualities, this concept could provide a valuable contribution to the design process.

This paper challenges the existing gap between the notion of "place" and "site," with relation to design theory and practice by critiquing a contemporary landscape design, Ballast Point Park, Sydney, Australia, through documentation of site-specific experience and performance. Place experience in this work is defined as an accumulation of encounters before, during and after the site visit. Following Henri Lefebvre's (1991, 64) call for restoring the concern for the body in spatial explorations, this study documents multi-sensory site experience through conceptual photography, site-writing (Rendell 2011), in-situ drawing, and sound recording over a ten-day period. This auto-ethonographic mapping is supported by interviews with designers and users. In contrast to the common post occupancy evaluation technique where the exploration is reduced to counting the number of users

and the frequency of using features, the focus of this evaluation is on the bodily motion through the site, the engagement of different senses and the process of developing familiarity with the site. The collected material is then reinterpreted through graphical and textual representation to provide a multifaceted critique of the design in relation to designers' intention and documentations and the users' experience of the site. Due to limited space, this paper only highlights experiences in relation to selected topics outlined below.

EXPERIENTIAL CRITIQUE:
BALLAST POINT PARK (BPP), SYDNEY, AUSTRALIA
Designed by Mc Gregor Coxall and Choi Ropiha (2010), BPP is a multi-award winning headland park located in the natural landscape of Sydney harbor [**FIGURE 1**] with rich cultural and historical background, including indigenous occupation, the first marine villa, mining for ship ballast, and heavy industry. Tracing the cultural, historical, and environmental narratives of the site, the designers intended to translate these qualities into a spatial design. Unlike other projects of similar nature, the designers were not influenced by a static design concept and preconceived park typologies. They established an exploratory design approach and maintained tightly engaged with the site by reconsidering the design at different stages, even during the construction
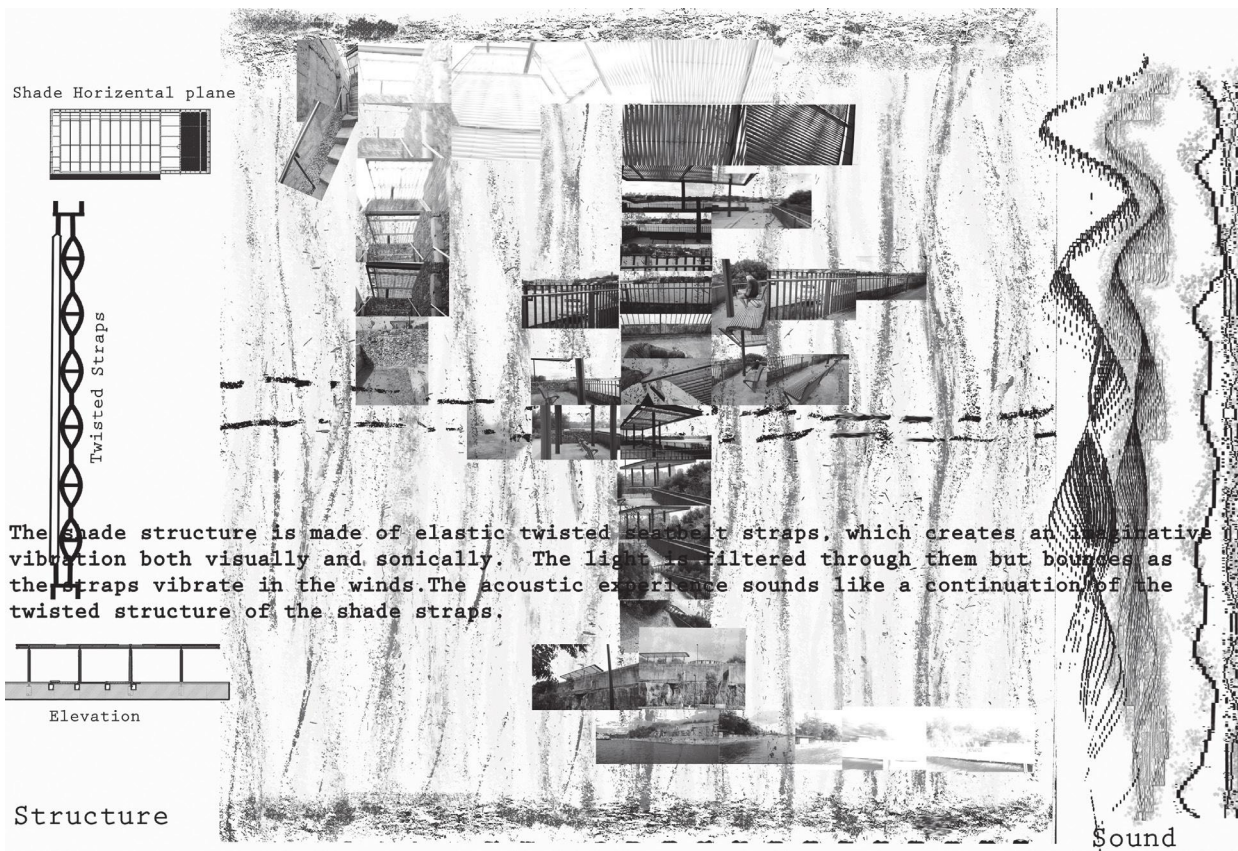
FIGURE 3 The lookout shade structure experience: a sunny day

phase. Acknowledging the value of this disrupted landscape, the designers maintained materials, objects, and landform from the previous occupations and reinterpreted the inherent properties of the site in a contemporary context.

Only a five minute ferry ride away from Sydney city center, BPP is presented with an exploratory approach. In contrast to the conventional understanding that good design provides signs and markers to enhance the visual accessibility and wayfinding (Kaplan et al. 1998), no bold signage marks the entry to this park. Instead, the visitor has to embark on an exploratory journey crafted by the designers by carefully manipulating the existing landform and topography. The design develops an interesting journey and encourages the user to experience the site in its surrounding context so that the site is not limited by its physical boundaries. Although the significance of site "legibility" has been stressed by authors such as Kevin Lynch (1960), the design situates the user at different angles and levels with various viewpoints and scenes but does not necessarily present a clear image of the site. Despite having a fuzzy image, the site still directs the user through unexpected pathways. As two teenagers described their journey to the site: "Fun and cool ... As we climbed the hills up and down, we did not exactly know where the road is taking us, but finally discovered our spot in a mysterious way" **[FIGURE 2]**.

A guiding point on site is the Tank 101, an enormous sculpture in the shape of an open ring. This contemporary interpretation of a large oil tank, a significant landmark of the site, creates a sensual space distinct from its immediate adjacent surrounding. Despite being an individual "object," the design of the tank promotes an experience beyond the visual and more integrated with the site design as a whole and a bodily experience. As the wind blows through the ring, the materiality, the ground plane and the wind turbines create a distinct soundscape. The metal panels of the tank carry Les Murray's lyrics are not instantly readable due to the enormous size. But exploring the lyrics progressively while moving through the space encourage deeper contemplation and reflection. The sensual reinterpretation of historical remnants has also created a non-literal formal expression mentioned even by mainstream users. The circular forms of the tanks as sculptural objects or reinterpreted into flat green subspaces, the art sculpture at the edge of the harbor along with rectilinear lines of the L-shape wall of the Menevia villa, the bund walls, the intersected vertical lines of the main entrance gate and the multi-level outlook spaces of the site, all express a congruent formal expression, informed by the site narratives.

On sunny days the lookout shade structure, overlooking the outstanding view of the Sydney harbor is the lingering spot for many users. The structure is inspired by the story of an

FIGURE 4 The lookout shade structure experience: a rainy day

old man who used to fly kites on site. The vibrations of the structure's interwoven straps create a distinct spatial experience as the wind and light are filtered through the gaps. Together with the shadows on the ground the wavy but linear form of the straps, made from seatbelt straps as an indirect reference to industrial material, which seem like a continuation of the strapped wooden toilet blocks and the wooden chairs [FIGURE 3]. While the structure is capable of protecting the users from light rain, heavy rain could easily penetrate inside the shade and force the visitors to leave the structure [FIGURE 4]. This highlights the role of temporality in open space design, which is often ignored by many designers.

Sustainability in this project is interwoven with the experience of the narratives paired with a contemporary understanding of material performance. The park was designed to be vegetated with provenance stock drawn from local plant communities and historic references to promote local biodiversity and to gradually return the site to its pre-colonial state. The unconventional material performance is also revealed through the metal staircases with open riser ascending six meters high with unique sonic experience in relation to the ocean sound [FIGURE 5], ramps with considerable slope and no landing, gaps intentionally left between pavement, and the use of broken concrete. Fine details in reinterpreting the site material, such as historic tiles or

the gabion walls, filled with reclaimed unexpected objects from the site, trigger what we may call a collective memory, regardless of the user's background.

Despite the few number of people using the site, the interviews revealed a high experiential quality of the users infused with sense of exploration. This challenges the conventional conception about the relationship between the "success" of a public space and frequency of use and whether evaluation of the success of a public space can be achieved by counting the number of people using different features of the site, regardless of the quality of their experience. In fact use in a quantitative sense can be a function of many variants, such as location, connectivity, or the socio-cultural complexity.

CONCLUSION

Despite the popularity of place-bound concepts in design theory and practice expressed through terminologies such as "sense of place," "genius loci," or "place attachment," there has been little discussion about the link between place experience as the lived engagement with the site and the way this can inform the design process. This study presents an experiential exploration of a contemporary landscape design and outlines the smart and sensitive experiential qualities of the design. Reinterpreting the historic narratives of the site the design strategy balances the removal and retaining

Structure

Sound

Day 1: I've been always scared of open riser staircases. To me, it's like stepping on the air on invisible planes of treads.

Day 5: I just remembered why I'm so afraid of open staircases; I've once fallen over open staircases when I was a kid. I'm overcoming my fear now.
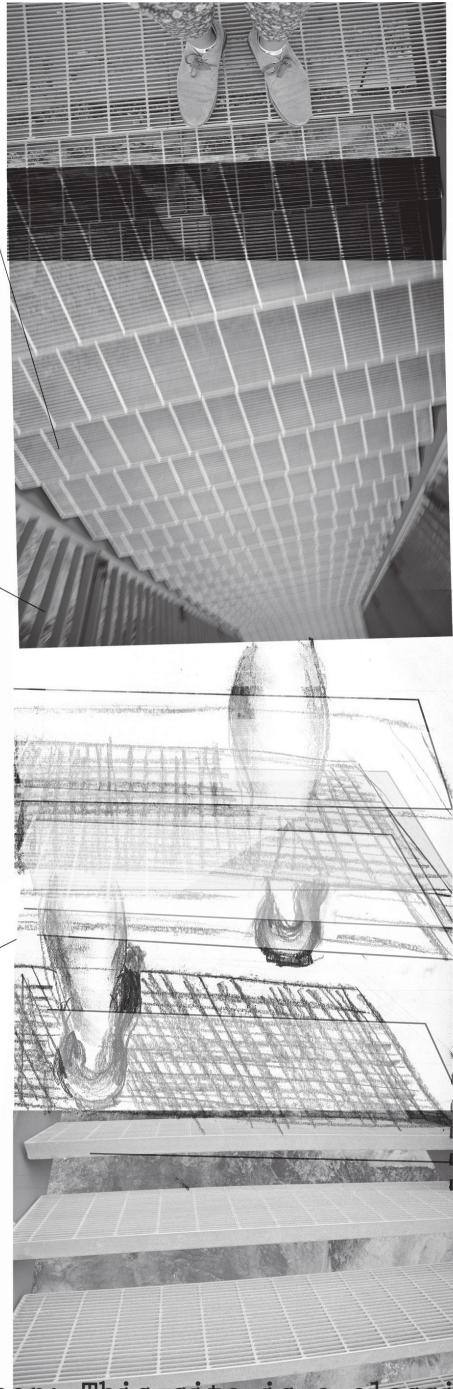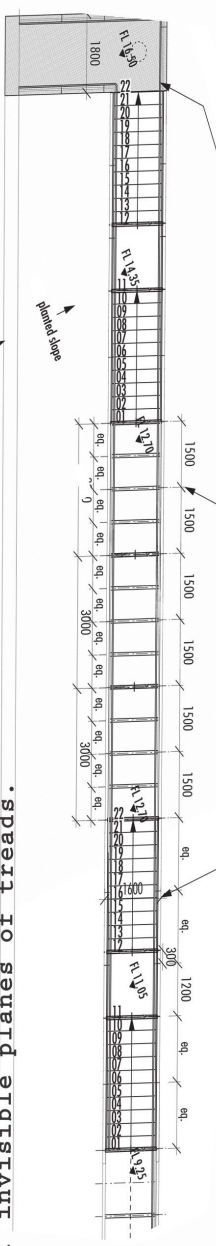
"The designer: This site is a classic for going beyond repititive design guidlines; The staircase goes six meters up with open riser and nothing in between."

FIGURE 5 Open riser staircase: unconventional structures and use of material

of artifacts and strategically navigates topographical and formal spatial explorations.

This paper investigates the design approach and outcomes in relation to human multi-sensory interaction with the site. The provided graphic works create a link between the design documentations and drawings and the interpretation of the site experience with regards to the process of familiarity. In contrast to post-occupancy evaluation, the implemented techniques suggest a more creative and holistic understanding of place and site, which would also allow the designer to depart from a reductive and simplistic understanding of place-bound concepts to a more applicable understanding of the complexities of place experience in the design process.

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DISSEMINATING LANDSCAPE ARCHITECTURAL SPECIFICITY ON THE GLOBAL STAGE

RHYS DANIEL WILLIAMS
Royal Melbourne Institute of Technology (RMIT University), Landscape Architecture, Australia
rhysdanielwilliams@gmail.com

Rhys Daniel Williams is a full-time doctoral student at RMIT University. His research, entitled "Towards an Ethnography of Landscape Architectural Practice," concerns the development of qualitative methods for evidencing design activity. This is approached through a research design focused on iterative experimentation with the methodology of ethnography. These experiments involve the testing and evaluation of methods for the study of precedent use. This agenda is explored further through the teaching of design research studios in RMIT's undergraduate landscape architecture program. Prior to commencing PhD study in 2011, Williams spent four years teaching across design architecture and landscape architecture at the Victoria University of Wellington, NZ.

design knowledge / precedent use / publishing

INTRODUCTION

A profusion of physical publications focused on representing realized landscape architectural projects has been published since the millennium. A search of the period 2000 to 2010 using the keywords "landscape architecture" and "landscape design" returns over 200 titles. It is safe to assume that this abundance of published material is tied to a growth in the quantity of work being realized and the demands of a professional audience hungry for knowledge. Given the discipline's relatively small scale and immaturity, the "sheer plentitude" of individual titles and projects is to be celebrated. These materials are one of a number of important ways that a project is made available for discussion. Visitations aside, it is, more often than not, by means of vicariously engaging with built works through the pages of books and journals, over time and through communal discussion, that designers remain cognizant of developments in the discipline (Clark 2012). However, what does the recent crop of published landscape architectural titles offer up for discussion? Beyond simply acknowledging that a project exists, what information about a design's changing actuality are readers provided with?

SPECIFICITY

These questions are considered from the perspective of a representation's ability to effectively convey the landscape architectural specificity of a given project. In the context of this discussion, "specificity" is defined as that which belongs or relates uniquely to the discipline. As such, it refers to what defines landscape architecture, its approaches, and projects. This is something that is not fixed, but evolving. Upon reviewing recent literature from the discipline, the specificity of a landscape architectural project can be thought to reside in its extensiveness, propensity for change, and systemic definition. In short, these three characteristics refer to the manner in which a project is implicated in its context, liable to transformation, and relationally defined.

REPRESENTATION

The characteristics I have just outlined make the task of representing a landscape challenging; whether too transient or too slow, too large or too detailed, as Sandra Parvu and Eunate Torres (2008) remark, landscape's constant mutation makes it difficult to capture. This difficulty, according to theorist and educator Peter Connolly (1999), results from the fact that landscapes are constituted of orders and aspects that are not easily represented, in the mind or on paper. Landscapes are therefore simultaneously difficult to understand on the basis of human perception and challenging to depict in a communicable manner. The result is "horror"; a horror that the screening of *Nightfall* exemplified in evocative fashion. To date, this predicament has been considered for its impacts on the process of design. By extension, this paper asserts that more attention should be given to its implications for representing built work, both to ourselves and others.

CRITICALITY

Understood in terms of its inherent difficulty, the task of representing realized landscape architecture projects can be caste as critical in a number of senses: on the basis of its importance to the discipline, and as a political project that seeks to expose, enlighten, and transform—providing "creative access" to aspects of a built work that without advocacy would remain unrecognized.

MATERIALS AND METHOD

In order to examine how effectively the specificity of a built work is conveyed in published representations, this paper examined the representation of a single project in books and periodicals. The project selected for this task is the Bordeaux Botanic Garden designed by Mosbach Paysagistes.

THE PROJECT

Drawing on Catherine Mosbach's discussions with Michael Menu (2002) at the time of the projects completion, the following description provides an overview of the project's physical manifestation and conceptual intentions.

The garden occupies a 4.5 hectare elongated site on the right bank of the Garrone River. The site forms part of La Bastide development area master-planned by Dominique Perrault Architecture. The garden welcomes a mixed patronage: functioning as a free pleasure garden and research facility, combining visitors who come to work, dwell, and stroll. In contrast to convention, this botanic garden is "open" to its surroundings. Located in the middle of this landscape, the garden's permeable perimeter fence serves to mediate the relationship between neighborhood and garden. Internally, the garden is defined by a number of zones. These units are further subdivided in an attempt to give the impression of a larger area, combining at points to create a "general landscape." The garden's contents are organized chiefly around three areas: the "Urban Garden" (*jardin urbain),* the "Field of Crops" (*champ de cultures*), and; the "Gallery of Natural Landscapes" (*galerie des milieux*). In the latter area, the city and larger Aquitaine Basin are caught up in a collage, visually borrowed, and physically transposed, respectively. For example, the dune fixation forest, one of a number of island outcrops that are constituted of materials from the Basin, is read against the gothic steeple of the Sainte-Marie Church. Such stratigraphic "meteorites," the islands appearing to have landed from outer space, are, like the rest of the garden, intended to evolve and "blend with time," arriving at a stratigraphy that is "specific" to this location.

SELECTION

The Bordeaux Botanic Garden was selected using a piece of primary research, in progress during the writing of this paper. This research involves producing an inventory of published titles that place specific emphasis on profiling built work. In addition to identifying individual publications, a schedule of the projects included in each title is under construction. At the time of writing, Bordeaux Botanic Garden was found represented in eleven titles published between 2002 and 2010. It is interesting to note that this made it the highest cited of over 500 recorded projects, featuring in 11 of the 37 titles processed thus far.

The titles included in the survey sample are varied in type, including established professional and semi-academic journals, catalogues accompanying awards and exhibitions, and imposing "coffee table" compendiums. A number of these publications are linked to projects aimed at evaluating a body of landscape architectural work and disseminating best practice. These include the Museum of Modern Art's *Groundswell* exhibition catalogue, LAE's *Fieldwork* publication and *Only with Nature,* the catalog for the 2003 European Landscape Biennial.

Furthermore, it is apparent from the description provided that the values informing the garden's design are commensurable with those defining contemporary practice. The

project invoked appears to be conceived, at least, as extensive in its connectedness: implicated simultaneously in the neighborhood, city, and region; embracing of change through its accommodation of physical and spatial transformation, and defined systemically as a body of relations that transcend the garden's individual parts and physical limits.

RESULTS

The representations reviewed depict a very different project to that conceived above. In this brief paper I would like to touch upon two related characteristics that defined the majority of representations surveyed for this exercise. These tendencies are implicated in the ineffectiveness of many representations to effectively convey a project on the basis of the aforementioned notion of specificity, instead rendering the project a formal, static, and discrete entity.

The use of secondary sources characterizes the majority of depictions. In the absence of an author having any personal contact with the project, visuals are often used to illustrate the project in terms of its conceptual origins, instead of using the designer's intentions as a basis for evaluating its actuality. Only that which was intended can be truly known and discussed with any authority. This approach results in rudimentary representations, with an emphasis on the project's "key" physical elements and spatial organization. Using secondary sources as a basis for representation means that the project is rarely depicted contemporaneously: as it is found to exist at the point in time when a representation is produced. Rather, the project is depicted in one of a select number of states throughout the course of its published history. This means that the project's representation across an eight-year period is largely immune to the affects of time—appearing stable and miraculous in its arrival at an eventual form. To further complicate matters, to when in the project's life these points relate is never actively declared. This makes it very difficult to "track" the project's development across time, whether in the case of a single published representation or across multiple titles. In fact, the only explicit references to the affects of time entertained at the scale of an individual representation relate to those "transformations" that can be directly perceived by a human within the course of a single visit. Transformations that occur across periods of time that defy human perception are alluded to but lack explicit recognition.

CONCLUSIONS

The fact that these tendencies were found to characterize a sample that is predominately the product of commercial publishing practices may seem unsurprising to many. The constraints affecting modern day publishers understandably make it difficult to pursue contemporaneous and comprehensive descriptions produced on the basis of primary evidence. However, what this brief exercise highlights is the predominance of representations that resort to journalistic means. To engage productively with landscape's specificity and its associated representational challenges requires time, money and authorial independence. But where can an approach to critically describing built works find a home. To date, the academy has focused on theorizing work. Could this remit be broadened to include the development of innovative strategies for researching built work that aim at the production of, what Bernadette Blanchon-Caillot (2012) refers to as, "enlightened knowledge" for a professional audience. Landscape's horror necessitates an approach to knowledge production that is contingent, particular and situated.

This paper poses many more questions than it answers. However, I hope it shines a light on the fact that the act of representing built works in a manner that is aligned to the values of our discipline is too critical a concern to leave to commercial publishing.

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THE FABRICATION OF HEROES IN LANDSCAPE ARCHITECTURE

KARSTEN JØRGENSEN
*Norwegian University of Life Sciences
(UMB), Landscape Architecture
and Planning, Norway*
karsten.jorgensen@umb.no

Karsten Jørgensen (b. 1953), since
1993, is professor of landscape architec-
ture at Norwegian University of Life
Sciences, where he earned a Dr.Sci.
degree (1989) in landscape architec-
ture. He is the founding editor of the
Journal of Landscape Architecture (JoLA)
established 2006. At UMB Karsten
Jørgensen has been responsible for
teaching history and theory of land-
scape architecture for a number of
years. His current research focuses on
contemporary history in landscape
architecture, including the present-
day management of historical and
monumental sites. Karsten Jørgensen
has published regularly in national
and international journals and books.

ROLE MODELS IN LANDSCAPE ARCHITECTURE

Where do role models in landscape architecture come from?
How do they become role models? What are the roles they
play, and how do they fill them?[1]

In the early days of the profession and of university pro-
grammes in landscape architecture that were established
from around the turn of the century 1900[2], landscape archi-
tecture education was based on apprenticeship, and the
master landscape architect or the professor would be a nat-
ural role model for his or her apprentices. When the pro-
fession got more established and higher education gradually
became more available, role models had to be found else-
where. Books, magazines, and to some extent exhibitions,
represent a growing arena of promotion of flashy projects and
heroes and heroines in design. The number of publications
edited, initiated, or sometimes even financed by the heroes
themselves, seems to be growing faster than publications
made by independent writers and institutions. Being visible
has become an evermore crucial mantra for landscape
designers, and seems more or less synonymous with being
published.

I have explored this phenomenon in a recent study, among
other things by looking at publications available in the
main online bookstores, and some tendencies are clear. One
is the growing numbers of publications about landscape

architecture: 10–15% of the books published since 1980 have appeared during the last twelve months, this development seems to have been continuous. And the number of publications presenting projects, rather than critically examining them, makes up a significant and growing proportion of the publications. The study does not include publications based on special achievements in competitions, and, even if some questions are raised, the jury system as a way to discern different levels of quality in projects is not questioned.

Typical publications of this "light" category of project presentations are Philip Jodidio's *Landscape Architecture Now!* (Taschen GmbH 2012) and Braun Publishing's *1000 x Landscape Architecture* (Verlagshaus Braun 2010). A number of national landscape architecture associations have published similar national reviews of "best practice" design in their countries, like Karsten Jørgensen and Vilde Stabel's *Contemporary landscape architecture in Norway.*[3] A prominent example is the series published by Landscape Architecture Europe (LAE): *Fieldwork* (Birkhauser 2006), *On Site* (Birkhauser 2009), and *In Touch* (Birkhauser 2012). This is an ambitious project aiming at presenting the best of contemporary landscape designs in Europe every third year. Another category of books is the attempts to establish the concept of contemporary design in landscape architecture more generally like Penelope Hill's *Contemporary History of Garden Design* (Birkhauser 2012). On the other there are many self-promoting books by landscape architects where critical analysis is conspicuously absent, like: Martha Schwartz and Emily Waugh's *Recycling Spaces: Curating Urban Evolution: The Work of Martha Schwartz Partners* (Thames & Hudson 2012), and many others.

JURY EVALUATION OF SUBMITTED WORKS

In general, most these books have been prepared following similar processes of collecting candidates for presentation and evaluating them in a jury of professionals.[4] The emphasis is mainly put on presentation of the works and their contexts. To some degree there are also categorizations, but only to a very small degree critical analyses.[5]

In general, the study indicates that landscape architects who become icons in their profession, are widely published in books and magazines, and that these publications strongly influence the professional agenda. This has implications for the professional history of landscape architecture, and it is also important for professional discourse.

ICONS OF THE 20TH CENTURY

This conclusion is supported by a set of interviews carried out in the context of the book *Contemporary landscape architecture in Norway,* mentioned above. Through interviews with prominent writers of landscape architecture in Norway, Sweden, Denmark, and Germany, it became clear that landscape architects who are regarded as icons of the twentieth

century today have, to a large extent, become so due to publications, sometimes posthumously. Thorbjorn Andersson[6] explained how he and his fellow editors "discovered" the landscape architect Erik Glemme (1905–1959) and published his work in *Utblick Landskap* in 1988, resulting in a general rehabilitation of Glemme, who was almost forgotten. Annemarie Lund[7] recalls that when she was a student C. Th. Sørensen, who is now regarded as one of the principal modernist landscape architects in the world, was not regarded as a role model or an icon among students nor among landscape architects in the nineteen-sixties and nineteen-seventies. His position today can, according to Lund, be attributed to a set of publications. Sørensen's own publications have been important, but especially a number of articles and books about him, like Sven-Ingvar Andersson and Steen Høyer's *C. Th. Sørensen—en havekunstner* (Arkitektens Forlag 2001) have canonized him and established his position. The role of exhibitions and awards has similar effects, but are left out of the discussion here.

BEST PRACTICE?

It appears that a number of specific promotion efforts, usually both by the front figure herself and by others, are necessary to achieve the status of a professional hero. This raises questions about the roles these "gurus" play: do they really represent "best practice landscape architecture"?

The conclusions from the study first of all shows that the phenomenon of publications as a means to become recognized and the importance of entering the "insiders" club, and thus aspire to hero status is a general and growing tendency in the landscape architecture profession. The types of publications and platforms vary, but it has become clear that both self-promotion and promotion by juries established to select works for a specific publication, result in status and influence on the professional agenda, and is thus regarded as parts of general acquisition by most landscape professionals. But there is no guarantee that the result of this system is that the best practice gets most promotion.

As a conclusion the study therefore emphasizes the responsibility of teachers and researchers to develop research on contemporary history of landscape architecture, and to include teaching in analysis and critique of projects in the LA curriculums.

1 In 2012, Tim Waterman published a series of short articles in the Landscape Institute website, addressing how students of landscape architecture may be misled by "flashy" or otherwise seductive projects presented in books or magazines. The series was named "Bad Role Models," and his conclusion is that students (and landscape architects in general) should be encouraged to work in a more contextual manner, and avoid basing their projects on the one "big idea" or brilliant concept. I think he is right, but for example the current development in publishing discussed here indicates that this problem is a more fundamental part of our profession.

2 Harvard University established the first programme at Masters level in 1900. In Europe there were several undergraduate programmes established during the 19th Century, but only in 1919 the Agricultural University of Norway (today Norwegian University of Life Sciences) established a university programme of "Garden Architecture" and appointed professor Olav L. Moen to lead the programme. See Jorgensen, K. and T. Sunesson: : "Om etableringen av landskapsarkitektutdanningen i Norge og Sverige" in Landskapet vi lever i Norsk Arkitekturforlag 1999

3 This paper is based on the experiences from this work. Similar books were prepared and published more or less simultaneously in Denmark,(New Agenda, Arkitektens Forlag 2010), South Africa (South African Landscape Architecture, Unisa Press 2012) and Germany (Timescales. Contemporary German Landscape Architecture, Birkhaüser 2013).

4 One problem regarding this kind of jurying is the different networks established in the architectural professions, where notions of what is "politically correct" may be defined and hinder an open discussion of quality criteria etc. Donolyn Lyndon published an essay called The Architectural Insider (Dwell Design 101 Architects, 2005) where this phenomenon is described. Those who are insiders make sure to support the same heroes

5 The LAE books have gone through a development towards more critical discussion, and LAE have announced an ambition to take this idea further, suggesting a kind of competition also among researchers and writers who want to go beyond mere descriptions.

6 Chief Landscape architect in Sweco, former editor of the Swedish magazine Utblick Landskap and author of several books.

7 Landscape architect, long time editor of the Danish journal Landskab, and author of several books.

IS THERE A DESIGN THEORY?

COMMENT BY UDO WEILACHER, MUNICH

The lack of theory in landscape architecture has been bemoaned for many years—especially by so-called "practitioners." Is it true that no applicable design theory exists, or is the professional world simply ignoring the fact that, in many schools of landscape architecture around the world, there are a number of research projects searching precisely for new approaches to contemporary design theory? In this session, a number of interesting research projects on design theory were presented, some of them with a very clear hands-on approach to usable design principles in "Best Practice Landscape Architecture."

MARTIN VAN DEN TOORN (from the École Nationale Supérieure du Paysage, France) asked in his presentation if there is a "'Design Science' in the Context of Landscape Architecture" and stated that the field of design research is rapidly expanding, also to non-design disciplines, such as information design, management, and software development. He pointed out that in the philosophy of science changes also occurred, which can be of great significance for design disciplines in general and for landscape architecture in particular. The scientific approach is no longer the "only road to science," van Toorn stated.

MARK ROMLEY EISCHEID (from the University of Edinburgh, United Kingdom) focused on "The Grid and the Non-Hierarchical Field: Peter Walker and Minimalist Landscape Architecture." Eischeid explained that Peter Walker's use of the grid was inspired by minimalist modern art, and for both formalist and functionalist purposes, provides a serial form that creates a non-hierarchical sense of "dimensional extension" or a non-hierarchical field. This approach can be traced back to the color fields of Abstract Expressionism and the work of artists such as Clyfford Still, Barnett Newman, and Jackson Pollock.

STEFAN DARLAN BORIS (from the Aarhus School of Architecture, Denmark) explored in his presentation about "Teaching Time, on Landscape Architecture" the concept of landscape laboratory, initiated by the Swedish University of Agriculture (SLU) in Alnarp. The principal idea behind landscape laboratories is to develop a one-to-one platform where researchers and practitioners can meet and cooperate on the development and testing of new design concepts for establishing and managing urban landscapes.

MELISSA CATE CHRIST (from the University of Hong Kong, Hong Kong S.A.R., China) in her thought-provoking presentation on "Evidence of Action: Towards an Ecology of Objects" stated that by extracting the notion of ecology from its traditional application in the natural sciences, we can sidestep the opposition of natural and man-made, positing that urban landscapes are collections of objects. She situates the practice of landscape design and planning within this collection

of individual objects that participate in "systems of interdependent relations." In order to understand how, where, and why to intervene in the urban environment, we should understand this "ecology of objects," as pointed out by Christ.

RICHARD ANDREW HARE (from the University of Copenhagen, Denmark), in his talk "Drawing for Learning—Learning by Drawing," focused on the learning mechanisms behind hand-drawing and placed hand-drawing in a broader educational context, beyond the traditional use of drawing in design. The role of hand drawing in learning, he stated, will be considered in terms of learning styles and multiple intelligences. He explained the power of hand drawing as a learning tool, not only in landscape architecture but also in the related disciplines, such as botany.

In a very short final discussion, all participants tried to formulate the key hypotheses of their particular research projects. By quickly discussing these theses, it became clear that the basic question is not if there is a design theory in landscape architecture, but how the profession can better approach the different aspects of design theory, by creatively combing the practical and theoretical methods of research in landscape architecture that attempt to describe and further develop the fundamental principles of a contemporary design language in landscape architecture. Unfortunately, time did not allow for a deeper discussion.

IS THERE A "DESIGN SCIENCE" IN THE CONTEXT OF LANDSCAPE ARCHITECTURE?

PIERRE DONADIEU
École Nationale Supérieure du Paysage de Versailles, France
p.donadieu@versailles.ecole-paysage.fr

Pierre Donadieu was educated as geographer and agronomist. He is a research professor in landscape architecture at the École Nationale Supérieure du Paysage at Versailles (ENSP) and now emeritus. He has published extensively, his latest book is entitled *Sciences du paysage—Entre théories et pratiques*. At the moment, he is engaged in setting up research units at departments in landscape architecture of universities in Lebanon, Tunis, and Vietnam.

MARTIN VAN DEN TOORN
TU Delft, École Nationale Supérieure du Paysage de Versailles, Landscape Architecture, the Netherlands, France
m.w.m.vandenToorn@tudelft.nl

Martin Van den Toorn is a landscape architect, professor at the University of Delft (Netherlands), and associate researcher at the Landscape School of Versailles (France).

design & research / design theory / knowledge-based design

INTRODUCTION

In design disciplines, the terms "design" and "science" are used very differently. There has been a strong tendency in the second part of the last century to make design "more scientific" (Cross, Naughton and Walker 1981). In this paper we will put forward another approach by making use of the large experience from practice, implicit in realized projects and the minds of designers, where the discipline can find its shared and accumulated design knowledge.

Both science and design have similarities and differences. In this paper we will start out with the term "design science" and the way it is used in landscape architecture. We will investigate how design science is related to theory, design methods, practice, and research in landscape architecture. Landscape architecture has a long tradition in practice but does not have a long tradition of theory. An early example of research on design methods was the publication of *Design by Nature* (McHarg 1971). A more recent example research on theory in landscape architecture is the article of Katherine Crewe and Ann Forsyth (2003) but rather exceptional both in content and in quality of research.

developments in design fields

Webber & Rittel (1973)	Design Methods Group (DMG)	Cross (1982; 2006)
↓	↓	↓
design as 'wicked' problem	a rational approach to design; but what to do with intuition?	'designerly ways of knowing'
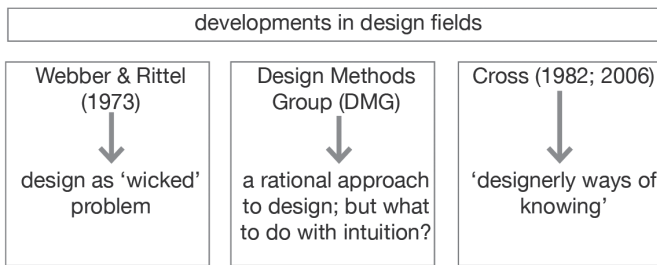
FIGURE 1 Three major developments in the design fields that have influenced theory and theory development in design disciplines.

developments in philosophy of science	Polanyi: tacit knowledge	developments in cognitive sciences
Popper Kuhn Feyerabend	three types of knowledge	role of drawing and visual thinking
↓	↓	↓
scientific method is no longer the only 'road to science'	- declarative knowledge (knowing what) - procedural knowledge (knowing how - tacit knowledge (personal knowledge))	drawing as a way of acquiring new knowledge
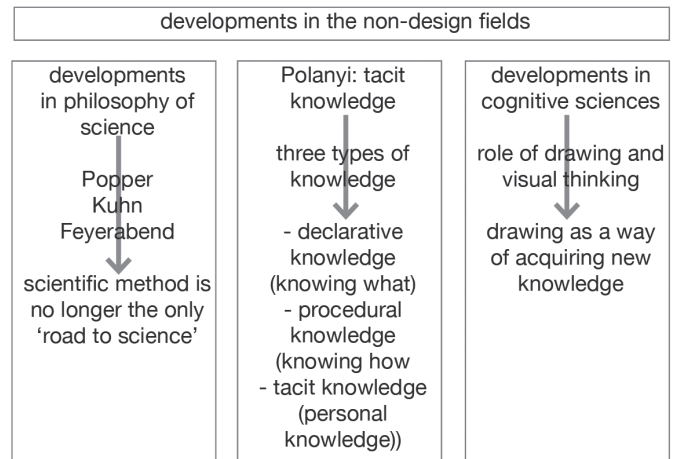
FIGURE 2 Three major developments in the non-design fields that have influenced theory and theory development in design disciplines.

IS "DESIGN" "SCIENCE" OR NOT?

The term design refers both to the process and product. This is a first distinction that is important to realize; the process refers to the procedure, the method, whereas the product refers to the plan either realized or on paper. Both include specific types of knowledge which for the larger part are implicit and that we further on work out in the term "design knowledge" In 2001, Nigel Cross gave a historical overview of the term "design science" in his article "Designerly ways of knowing: design discipline versus design science."

He makes a clear distinction between "scientific design," "design science," and "science of design."

• "Scientific design" refers to the design process. The term scientific design originated from the Design Methods Group that at first was searching for methods for design based on scientific methods. What remains is the use of scientific knowledge in design.

• "Design science" can be considered the complement of scientific design but focusing on the content and less on the procedure

• "Science of design" implies the study of design by making use of the scientific method like comparative studies of design methods based on an explicit analytical framework.

At the moment, the first two terms are hardly used since it implies a contradiction; most people will agree now that design is not science. On the other hand, many will agree that science does imply design. The third term comes back in what we now call research of design.

CHANGING VIEWPOINTS ON SCIENCE AND ON THE DEVELOPMENT OF KNOWLEDGE

In the second part of the last century an important development took place in the philosophy of science, which has

also affected theory, and theory development in design disciplines. The viewpoint of one scientific method moved gradually to the idea of different types of knowledge. It was part of a larger movement of the changing role of science in society; no longer as totally separated but more of science in relationship with society.

Before the eighties, the criterion for "being scientific" was based on whether and how you applied the scientific method in your research (Chalmers 1986). This scientific method referred to the empirical approach both in the natural and in social sciences (Groot 1972). Popper, Kuhn and Feyerabend more or less came to the conclusion that the logical models of pure science did not apply to actual situations and thus not to scientific practice. So by the nineteen-eighties, the scientific method was no longer seen as the only way to scientific knowledge both in non-design fields and in design fields [**FIGURE 1 + 2**]. Gradually the idea emerged that there were different types of knowledge: declarative, procedural, and tacit [**FIGURE 3**]. These new viewpoints opened also interesting perspectives for design disciplines.

DESIGN, SCIENCE AND KNOWLEDGE IN LANDSCAPE ARCHITECTURE

Landscape science Generally speaking "landscape science" is part of geography since "landscape" comprises the physical and the social aspects of the land and is studied in geography. Since In landscape architecture the existing landscape before intervention is always part of the design problem, the landscape as object of planning and design does make part of design thinking and theory. In French references on landscape architecture the term "*science de paysage*" or equivalents of "landscape science" are frequently used (Donadieu and Perigord 2007; Donadieu 2012).

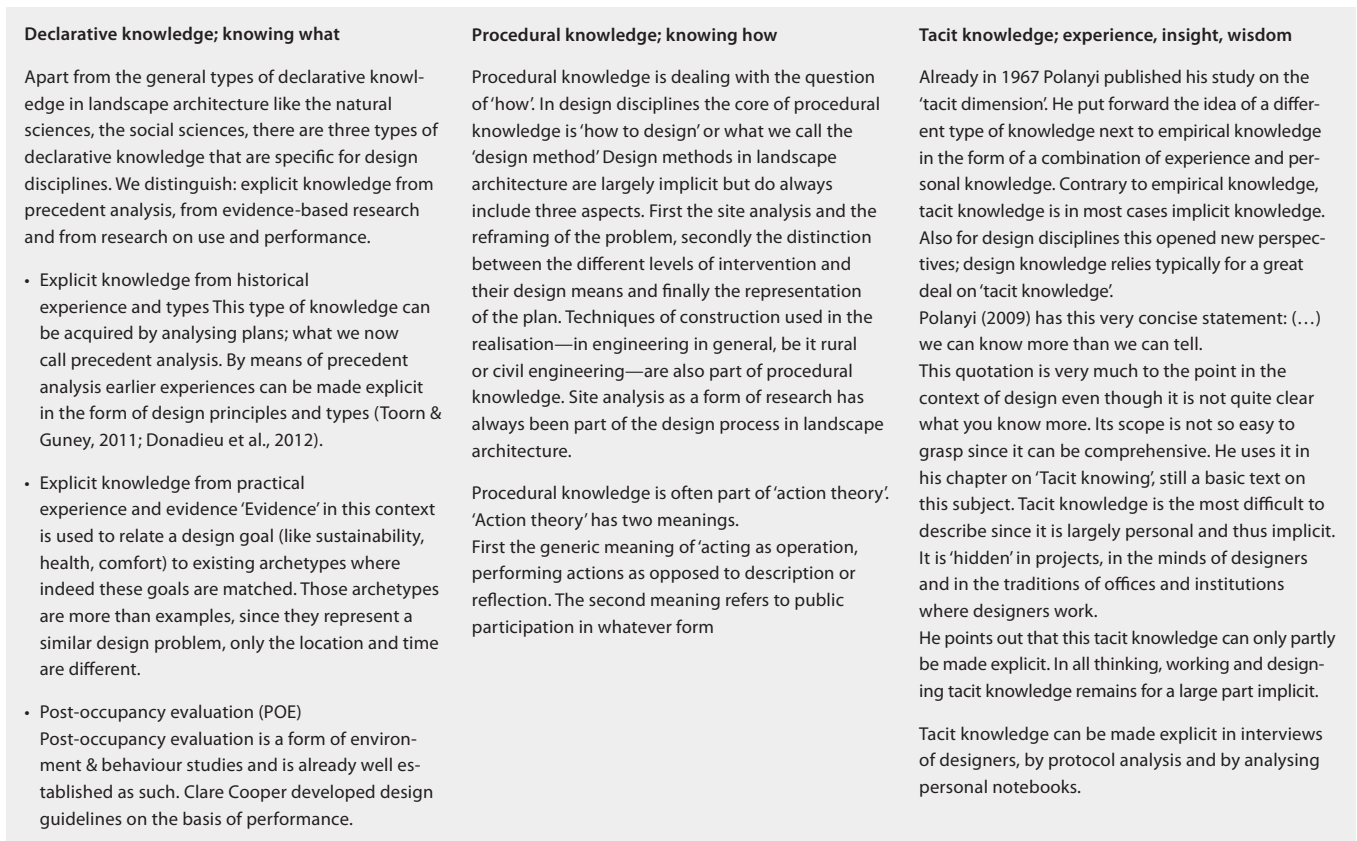| Declarative knowledge; knowing what	Procedural knowledge; knowing how	Tacit knowledge; experience, insight, wisdom
Apart from the general types of declarative knowledge in landscape architecture like the natural sciences, the social sciences, there are three types of declarative knowledge that are specific for design disciplines. We distinguish: explicit knowledge from precedent analysis, from evidence-based research and from research on use and performance.	Procedural knowledge is dealing with the question of 'how'. In design disciplines the core of procedural knowledge is 'how to design' or what we call the 'design method' Design methods in landscape architecture are largely implicit but do always include three aspects. First the site analysis and the reframing of the problem, secondly the distinction between the different levels of intervention and their design means and finally the representation of the plan. Techniques of construction used in the realisation—in engineering in general, be it rural or civil engineering—are also part of procedural knowledge. Site analysis as a form of research has always been part of the design process in landscape architecture.	Already in 1967 Polanyi published his study on the 'tacit dimension'. He put forward the idea of a different type of knowledge next to empirical knowledge in the form of a combination of experience and personal knowledge. Contrary to empirical knowledge, tacit knowledge is in most cases implicit knowledge. Also for design disciplines this opened new perspectives; design knowledge relies typically for a great deal on 'tacit knowledge'. Polanyi (2009) has this very concise statement: (…) we can know more than we can tell. This quotation is very much to the point in the context of design even though it is not quite clear what you know more. Its scope is not so easy to grasp since it can be comprehensive. He uses it in his chapter on 'Tacit knowing', still a basic text on this subject. Tacit knowledge is the most difficult to describe since it is largely personal and thus implicit. It is 'hidden' in projects, in the minds of designers and in the traditions of offices and institutions where designers work. He points out that this tacit knowledge can only partly be made explicit. In all thinking, working and designing tacit knowledge remains for a large part implicit.
• Explicit knowledge from historical experience and types This type of knowledge can be acquired by analysing plans; what we now call precedent analysis. By means of precedent analysis earlier experiences can be made explicit in the form of design principles and types (Toorn & Guney, 2011; Donadieu et al., 2012).	Procedural knowledge is often part of 'action theory'. 'Action theory' has two meanings. First the generic meaning of 'acting as operation, performing actions as opposed to description or reflection. The second meaning refers to public participation in whatever form	
• Explicit knowledge from practical experience and evidence 'Evidence' in this context is used to relate a design goal (like sustainability, health, comfort) to existing archetypes where indeed these goals are matched. Those archetypes are more than examples, since they represent a similar design problem, only the location and time are different.		Tacit knowledge can be made explicit in interviews of designers, by protocol analysis and by analysing personal notebooks.
• Post-occupancy evaluation (POE) Post-occupancy evaluation is a form of environment & behaviour studies and is already well established as such. Clare Cooper developed design guidelines on the basis of performance.		

FIGURE 3 This diagram gives an overview and comparison of the three types of knowledge in the context of landscape architecture.

What in general French studies on theory of landscape architecture (Berque 1994; Roger 1995; Girot 2000; Donadieu 2012) have in common is that they comprise a theory on "landscape" as part of a theory of "landscape architecture." Comparing this with Anglo-Saxon studies on theory.

Design knowledge in landscape architecture "Design knowledge" is the generic knowledge that forms the core of design; the knowledge used to solve design problems. The different types of knowledge that comprise design knowledge are: declarative (knowing what), procedural knowledge (knowing how), and tacit knowledge (knowing why; personal knowledge and wisdom). Visual thinking bridges the link between the three types of knowledge.

Design theory goes a step further: it can be seen as an explicit and coherent framework of different types of knowledge that enables planning and design in daily practice. Theory development in landscape architecture is not a goal as such but a "vehicle for thought" both in and outside the discipline. It is meant to organize knowledge, to stimulate ideas, to enable critique and ultimately an improvement of practice in the creation of useful, meaningful, and healthy environments, the goals for the discipline at large. Theory in design disciplines can be seen as a way of organizing existing knowledge and developing new knowledge, at a higher level of abstrac-

tion. It can also serve as a means of finding gaps in existing knowledge and lack of coherence or clarity. Design knowledge characterizes the design in landscape architecture both as a product and a process [**FIGURE 3**].

CONCLUSIONS AND DISCUSSION
In philosophy of science in the last decades, we have seen gradual change from one scientific method to different types of knowledge (declarative, procedural, and tacit knowledge). The same types of knowledge are at hand both in science and design but their relative importance is different; in science declarative knowledge forms the core whereas in design tacit knowledge.

Theory in science is the driving force of new developments whereas in design, theory is in the practice and practice is driving new developments [**FIGURE 4**].

Increasing importance of research in design disciplines is part of a gradual move towards a more rational approach in design. Although the number of plans increases rapidly, a real advance in understanding of design processes, relation to use and performance is lacking. In this rationalization design thinking and design knowledge play a key role.

SCIENCE	DESIGN
• **method:** testing hypothesis	testing performance after realisation of the project
critique is fundamental to all science; Popper introduced the concept of 'falsification'	critique is mostly personal, implicit and not consistent critique as research on performance is rare
scientific method (more or less shared knowledge among scientists)	design method (not one overall method used by designers but rather an approach which is largely implicit)
• **types of knowledge (relative importance):** 1. declarative 2. procedural 3. tacit	1. tacit 2. procedural 3. declarative
• **role of theory:** theory defines development of science at large	practice defines development of the discipline; theory is in the practice
• **of research:** paradigms play a key role in development of science; since theory is directing development	research is part of any design process but only contributes to the project itself; design research is not much developed yet
• **the role of perception;** in science there is a 'neutral observational language' largely based on quantitative measurement	in design perception and solution continuously interact with each other in an iterative process of plan development in which design thinking plays a key role

FIGURE 4 Overview of differences between "science" and "design" from a theoretical point of view.

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THE GRID AND THE NON-HIERARCHICAL FIELD: PETER WALKER AND MINIMALIST LANDSCAPE ARCHITECTURE

MARK ROMLEY EISCHEID
University of Edinburgh, Edinburgh School of Architecture and Landscape Architecture, United Kingdom
eischeid@stanfordalumni.org

Mark Romley Eischeid is a PhD candidate and part-time tutor at the Edinburgh School of Architecture and Landscape Architecture at the University of Edinburgh, and he is a licensed landscape architect in California (USA). He has degrees and professional experience in earth science (BS, Stanford University, USA), landscape architecture (MLA, UC Berkeley, USA), and fine art (MFA, Edinburgh College of Art, UK). His doctoral research focuses on the aesthetics of twentieth-century American landscape architecture. Eischeid has lectured about his practice and research as well as exhibited in solo and group exhibitions in Europe, the United States, Greenland, and Japan. Along with M. Francisca Lima, he is the co-chair of the "Shrinking Cities | Expanding Landscapes" conference, held in November 2013 at the University of Edinburgh.

grid / non-hierarchical field / Peter Walker / Agnes Martin / Minimalism

Peter Walker (b. 1932) is an American landscape architect, educator, author, and publisher who has translated his practice into pedagogy while educating generations of landscape architecture students in academic institutions throughout the United States. While Walker himself has highlighted Minimal Art of the nineteen-sixties as inspiration for his practice from the nineteen-seventies onward, there does not yet exist a detailed analysis of the relationship between Minimal Art and Walker's minimalist landscape architecture. This paper will focus on one design element, the grid, as a means to investigate this relationship and to explore the aesthetic character of Walker's grids.

By the early nineteen-seventies, Walker, a self-described modernist, had begun to realize that he had developed "picturesque" tendencies in his professional work (Walker 1997, 18). These professional tendencies contrasted with his personal interest in Minimal Art, which he began collecting in 1965 (personal communication, 2013). While teaching at the Harvard Graduate School of Design in the nineteen-seventies, Walker and his students explored the feasibility of applying principles of Minimal Art, such as "flatness, pattern,

seriality, dimensional extension, [and] repetition," to landscape architecture. (Walker 1989, 11) By the late seventies, Walker's professional practice had begun to reflect his personal interest in Minimal Art. Influenced by artists such as Carl Andre, Sol LeWitt, and Agnes Martin, one of the changes in Walker's practice was the explicit expression of the grid.

One of the key features of any grid, whether two-dimensional or three-dimensional, is non-hierarchicality—every element of a grid (point, line, module) is the same as the others. This non-hierarchicality provides the opportunity to imagine infinite expansion of the grid, simply by adding another column or row of modules/lines/points (Burke 1759). This sense of both non-hierarchicality and infinite expansion was first celebrated in mid-twentieth-century Abstract Expressionism and Color Field paintings. For example, the paintings of Clyfford Still and Barnett Newman suggest that they are a portion of a larger unviewable field that exists outside the boundaries of the canvas. The abstract expressionist paintings of Jackson Pollock and the monochromes of Yves Klein and Ad Reinhardt have no fixed points upon which to focus your eyes; the viewing of these paintings could conceivably be an indefinitely long experience. For many art critics and historians, this combination of content- and phenomenologic-based expressions of infinity led them to think of the sublime.

Largely influenced by Edmund Burke's definition of the sublime (Burke 1759), twentieth-century art critics and historians identified contemporary expressions of the sublime in Abstract Expressionism, such as Robert Rosenblum's abstract sublime (Rosenblum 1961), Irving Sandler's terrible and elated sublimes (Sandler 2009), Lawrence Alloway's American sublime (Alloway 1963), and Arthur Danto's heroic sublime (Danto 2002). Twentieth century ideas about the sublime in art were extended to Minimal Art, too. While Alloway (1973) and Rosalind Krauss (1994) allude to the sublime in Agnes Martin's work, Carter Ratcliff (1973) is quite explicit, referring back to Burke's concept of the artificial infinite in her work.

Agnes Martin's drawings, paintings, and prints of grids were largely executed between 1959 and 1973. Until about 1963, Martin's grids stopped short of the support's edge, allowing for a margin of ground around the figured grid. It was not until 1963 and thereafter, when Martin's grids extended all the way to the support edge, that the expression of infinity, and therefore a relationship to the sublime, was at its fullest in her work. Martin's grids, then, are an entirely new kind of grid in the fine arts; neither drafting guide, cartographic framework, transparent plane, nor opaque surface, her grids are not quite figure and are definitely not ground. As Martin said, implicitly referencing a Kantian sublime, "My

paintings have neither objects, nor space, not time, not anything—no forms. They are light, lightness, about merging, about formlessness breaking down form." (Willard Gallery, undated typescript; reprinted in Alloway 1973, 62)

Agnes Martin's grid paintings are a significant prelude to Walker's gridded landscapes. Martin's paintings are permanent, intentional, and material expressions of the grid, much like Walker's landscapes. While Martin often denied that her drawings and paintings are abstractions of landscape, it was not uncommon for her to use landscape elements as titles for her work. Additionally, her line grids resemble the hopeful marks of dirt roads made upon the southwestern US landscape by property developers. The most consistent and explicit expressions of the grid in twentieth-century American landscape architecture are by Peter Walker, whose work has been described as minimalist (Levy 1997). Through his use of the grid, Walker's landscapes reference a non-hierarchical sense of "dimensional extension" and potentially infinite expansion that represent a landscape architectural manifestation of the sublime earlier expressed in Abstract Expressionism and Minimal Art. Three of Walker's projects from the nineteen-eighties and nineteen-nineties exemplify an explicit expression of the grid.

An early and very explicit use of the grid by Walker was executed in collaboration with fellow landscape architect Martha Schwartz as a one-day installation at the Massachusetts Institute of Technology in 1980. While the size of the Necco Garden grids responds thoughtfully to the size of the lawn clearing that is located between buildings and groves of trees, they could, as with all grids, extend indefinitely in all directions.

Burnett Park in Fort Worth, Texas, originally completed in 1983 (with play areas and equipment added in 2010) is an example of how Walker developed the technique of layering grids as exhibited in the one-day installation in the Necco Garden to create a permanent design for a public park. The design includes a line grid of paved walkways, a module grid of lawn panels, and another grid of paved walkways oriented at 45 degrees to the original grids.

A more recent example of Walker's work that more clearly references Agnes Martin's paintings is the Keyaki Hiroba Plaza in Saitama, Japan, completed in 2000. This plaza occupies the roof of a shopping center. There are multiple grids operating in this design: vents and other equipment servicing the building are laid out in a grid and expressed in the plaza, the trees are laid out in a point grid that correlates with the structural column grid of the building below, small square fountains are laid out in a grid in the center of the plaza amongst the grid of trees, and skylights that flood the shopping center in the day and are light by the shopping

center at night are arranged in a tight point grid. These grids are multi-layered and multi-scaled, and the skylights provide a different experience of these grids at different times of the day. Despite the fact that this roof plaza has very definite limits—overstepping these limits presents a very real danger to health—the density of the trees and the multiplicity of the grids suggest an expansiveness that, even if briefly, suspends the reality of the plaza's boundaries.

While Martin's and Walker's grids share qualities of non-hierarchicality and the sublime, there are two significant aspects that differentiate them. First, Walker's layered grids as presented in these examples provide a more dynamic sense of "dimensional extension," and therefore the sublime, than that which exists in Martin's drawings and paintings. Walker's layered grids have the potential to extend in two dimensions at potentially multiple angles (especially when the grids are not orthogonal to each other, as at Burnett Park), as well as extend in a third dimension through infinite layering. This is not just (one-, or two-)dimensional extension; it is multi-dimensional extension. And as Walker's grids are part of designed landscapes, which—as all landscapes do—change over time, they change over time, thereby adding the fourth dimension to the dynamic nature of Walker's grids, a dimension not possible in Martin's work. Second, Walker's grids are not just seen, as in Martin's drawings and paintings, but they are multi-sensorially experienced. The viewer of Walker's grids also inhabits them. As you move along and among Walker's grids, you experience infinitely changing views of the grid and of the landscape in which that grid is inscribed. The grid itself is non-hierarchical, and so are your views of, and your movement along and amongst, the grid.

Inspired by Minimal Art, Walker translates Martin's grids into the landscape, creating an entirely new experience. More than just a non-hierarchical grid, Walker's landscapes are non-hierarchical fields that express a sense of multi-dimensional extension that suggest a uniquely landscape architectural sublime.

ACKNOWLEDGEMENTS

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A DRAWING FOR LEARNING—LEARNING BY DRAWING

RICHARD ANDREW HARE

The University of Copenhagen, Landscape Architecture, Denmark
hare@life.ku.dk

Richard Andrew Hare was educated at Edinburgh College of Art and Leeds Metropolitan University. He has taught at Leeds Metropolitan University, Copenhagen University, and Swedish University of Agricultural Sciences. Hare specializes in drawing and design with project experience in UK and Denmark including development plans for urban parks and small-scale design.

ROSALINA WENNINGSTED-TORGARD

The University of Copenhagen, Department of Geoscience and Natural Resource Management, Denmark
rwt@ign.ku.dk

Rosalina Wenningsted-Torgard was educated at The Royal Danish Academy of Fine Arts School of Architecture (2009). She has teaching and project experiences from the Danish Architecture Center (2006–2008), Avedøre Wastewater Services (2009–2011), and University of Copenhagen (2011–2013).

hand-drawing / learning / pedagogy / cross-disciplinary, science

DRAWING SCIENCE AND LANDSCAPE

The impetus for our work within this field of drawing in science comes from structural changes to the landscape architecture education at Copenhagen University. At one level, the landscape architecture education is fostering a closer link between science-subject teaching and design studio. At an organizational level the landscape architecture education that originated as part of the Royal Danish Veterinary and Agriculture University (KVL), came under Copenhagen University's faculty of science in 2012.

LEARNING PROCESS

Recent projects looking at drawing in science education have shown promising results. There is, of course, a long history of scientists drawing to explore, express, and develop ideas visually: we need only to think of Leonardo da Vinci, Michael Farady, James Clerk Maxwell, et cetera. While closer to our own discipline of landscape architecture, botanical illustration continues to be a valued scientific endeavor. In recent years, drawing skills have vanished from high school curricula, proving further that hand-drawing is undergoing a period of neglect. Yet, through the work of the Drawing

Research Network and others, this is beginning to change. In science, teaching projects that specifically foster drawing are now challenging the norm.

What we find interesting is that such projects aim to make drawing integral to learning and not simply a pleasant extra activity. "In the science classroom, learners mainly focus on interpreting others' visualizations. When drawing does occur, it is rare that learners are systematically encouraged to create their own visual forms to develop and show understanding" (Ainsworth, Tytler and Prain 2011).

What we have observed amongst our teaching colleagues supports this notion. Scientists are not generally versed in drawing technique, while design teachers tend to see drawing as a tool for expression rather than for learning.

DRAWING AND SCIENCE LEARNING

Artist Felice Frankel has worked with the project Picturing to Learn (PtL) on the topic of visual expression in science education across a range of science disciplines. The project saw a collaboration between Harvard, MIT, Duke, Roxbury Community College, and the School of Visual Arts.

The starting point for the project was the thesis that: "Undergraduate students can clarify their own understanding of scientific concepts and processes by creating drawings that explain these concepts to non-experts. Drawings can be useful for teachers as a) assessment tools, allowing instructors to identify students' scientific understanding and pinpoint their misconceptions and b) educational tools, to help inform instructors' lecture preparation".

When students were required to explain through drawings, as opposed to in written form, one of the significant outcomes was that the divergence of answers increased significantly. The drawings were also used as a gathering point for the discussion of topics. The project resulted in a database of over 3,000 drawings created by students of various science disciplines. As a learning tool, drawing was shown to offer the opportunity for students to internalize their learning to a high degree. It also became clear that humor and awareness of a visual aesthetic were commonly used by students. Drawing offered students the opportunity to make the science "their own."

In their article for *Science Education*, "Drawing to learn in science," Shaaron Ainsworth et al. review a number of science drawing initiatives and identify five key roles for drawing in science education:
• Drawing to Enhance Engagement
• Drawing to Learn to Represent in Science
• Drawing to Reason in Science
• Drawing as a Learning Strategy
• Drawing to Communicate

We can recognize a number of these roles that apply implicitly to the design process. Representation, reasoning, and communication receive ample attention on our landscape architecture programs. Many of us also use drawing to

enhance student engagement. However, fostering the use of drawing as an explicit learning strategy is perhaps less in evidence.

DRAWING FOR DRAWING'S SAKE

Kathryn Moore presents a critique of perceptual theory in design education in which the near mystical qualities of drawing are debunked. Moore warns us of the pitfalls of losing ourselves in the belief that drawing bestows on us a rather ill-defined visual understanding. She states that "Drawing in itself is supposed to enable us to understand more, visually. The question hardly ever asked is, to understand more about what?" The very real danger exists that we draw simply because we enjoy the process and product of drawing.

Emma Robertson from UEA has worked with drawing in science education and states that drawing can be used to lead science students to "… communicate scientific messages in more emotive, meaningful and engaging ways, to promote greater understanding…." We can think of this as the emotional charge of the learning activity, imbuing the activity with extra meaning.

Beyond Robertson's imperative of drawing as a learning mechanism, we can also view drawing as a practical tool for handling new learning. Drawing, as with language, can never be free of aesthetic potential, but perhaps approaching drawing from a learning perspective can give us a new clarity about what drawing is and can be. It also helps us to engage with drawing in a way that Moore implicitly encourages, allowing us to take" …critical intelligent discussions about what we are looking at…"

TEACHING 2012/13

Our current focus in teaching is through a transdisciplinary year one module that integrates Vegetation and Ecology (NG2) and a design studio (Plan and Design). We also draw on experience with a master's module Urban Eco-systems and various masters thesis projects.

The aim of the NG2 module is for the students to understand the environmental relations between soil, plants and water to a degree that enables the student to propose adjustments to improve these relations. Basic facts, rules, and principles are used to calculate these system-processes and technical solutions. Drawings in **FIGURE 1** show representations of growth-conditions for trees and rain gardens in combination with constructions of drainage and infiltration systems.

The primary focus of the Plan and Design module is to use this measurable knowledge in combination with sensitivity towards specific site conditions, to create an improved atmosphere, quality of human experience and integration with other urban functions.

FIGURE 2 displays a selection of drawings intending to represent spatial quality of the urban open space, as well as insight into the underlying systems in the form of proposed constructions beneath the terrain.

FIGURE 3 displays examples from a master thesis project in which flow-patterns are addressed as a means of drawing out the potential logic of hydrological behavior as a new structural layer in the existing urban landscape.

CONCLUSION

There is enormous potential for using hand-drawing as a learning tool for our landscape architecture students. By engaging with science and other subjects through hand drawing we can sharpen our students' representational skills. More importantly, we can give students a means to navigate elegantly between study and design process. An example could be the combination of simple conceptual diagrams of basic principles as well as more elaborate cross sections, drawn to scale, that can start as simply descriptive drawings but be repeated to explore different scenarios. This gives students a simple means of expanding their repertoire of alternatives, at different levels of complexity, within a variety of spatial situations.

Improving the coherence within the learning and design tasks that we present to our students can help them to use hand drawing across a range of activities and address every-thing from infrastructure system-logic, eco-biological values to aesthetics and spatial relations. This requires science teachers to invest in drawing for learning and for design teachers to expand their view of drawing within the curriculum.

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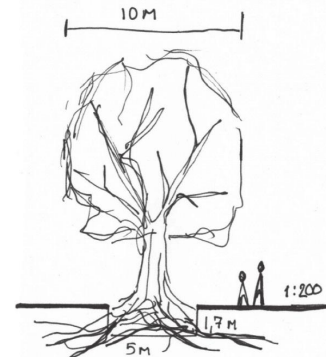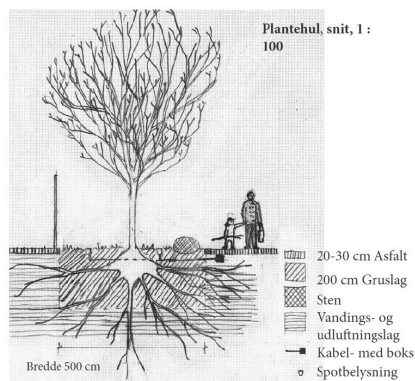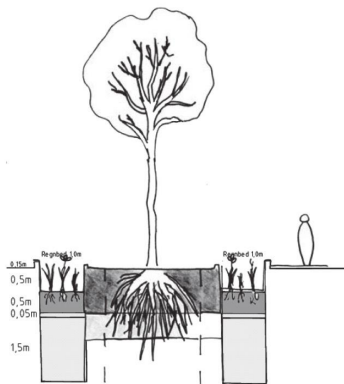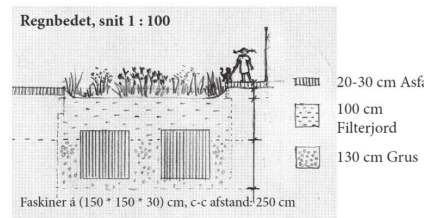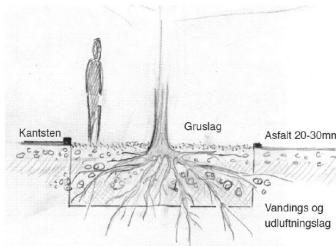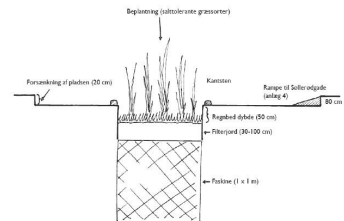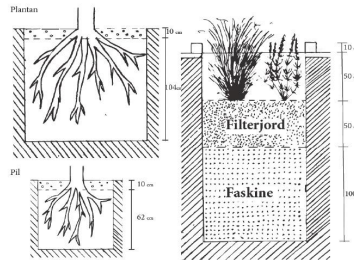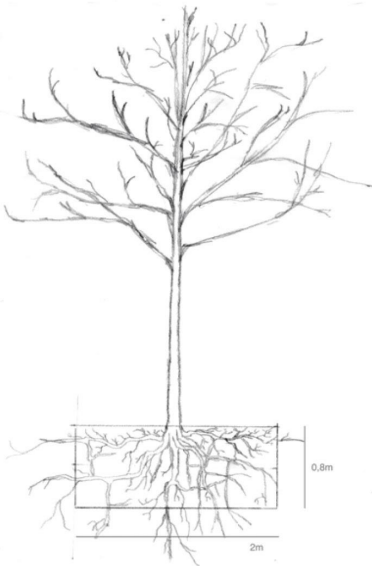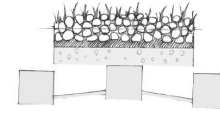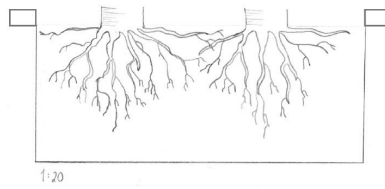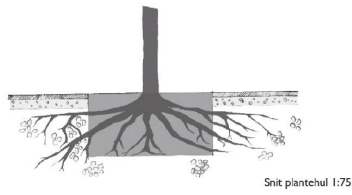**FIGURE 1** Sections of constructions (Drawings by students at the course modules Vegetation and Ecology [NG2] and a design studio [Plan and Design], University of Copenhagen 2012/2013)
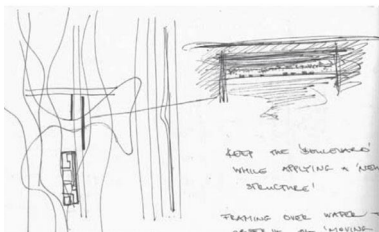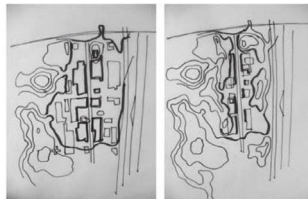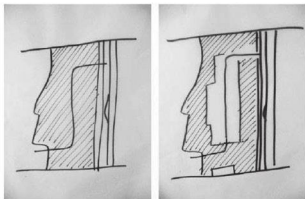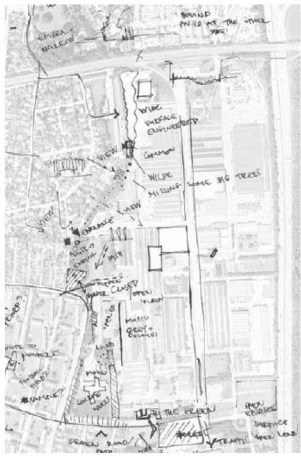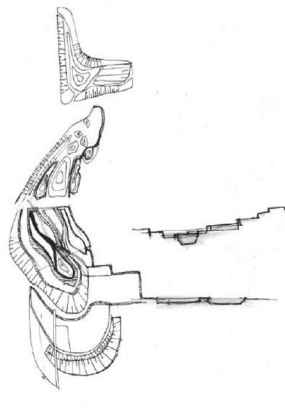
FIGURE 2 Flow patterns as structural layer (Drawings by Réka Nemeth, Master Thesis 2013)

EVIDENCE OF ACTION: TOWARDS AN ECOLOGY OF OBJECTS

MELISSA CATE CHRIST
University of Hong Kong, Division of Architecture, Hong Kong
mcchrist@hku.hk

Melissa Cate Christ OALA, CSLA, ASLA is an assistant professor of landscape architecture at the University of Hong Kong and a founding principal of transverse studio. A registered landscape architect, her design research and practice explores mechanisms of critical intervention at the juncture of landscape, culture, urbanism, and infrastructure. Prior to teaching at HKU, Christ was a project manager and designer at Gustafson Guthrie Nichol Ltd, an urban designer at Dutoit, Allsop Hillier; and an instructor and design critic at the University of Toronto and the University of Washington. She has a Master of Landscape Architecture from the University of Toronto and a Bachelor of Liberal Arts from St. John's College.

evidence of action / infrastructure / ecology / objects / design agency

Extracting the notion of ecology from its traditional application in the natural sciences, we can sidestep the opposition of natural and man-made by positing that urban landscapes are collections of infrastructural objects. These collections can be conceived of as an ecology, in that they are "the product of the interrelationship between [a] system and its environment" (OED 2008). Handrails, curbs, drains, retaining walls, or bio-engineered slopes, these designed objects perform specific functions within the landscape—safely guiding pedestrians, directing and collecting water, or containing soil—but they can also reveal (Heidegger 1977, 11) the often distributed and decentralized networks of which they are a part. Understanding this revealing as evidence of infrastructural action, these objects can be defined as instances of individuated, heterogeneous assemblages that participate in "systems of interdependent relations" (Bryant 2012) where they are "a source of action and susceptible to being altered or 'affected' by … encounters with others, and thus also a recipient of action"(Bennett and Livingston 2011, 12). In this context, the agency, and therefore the practice, of landscape architecture and planning is the documentation, design, and construction of these individual objects which both affect and are affected by the form and function of the urban public realm.
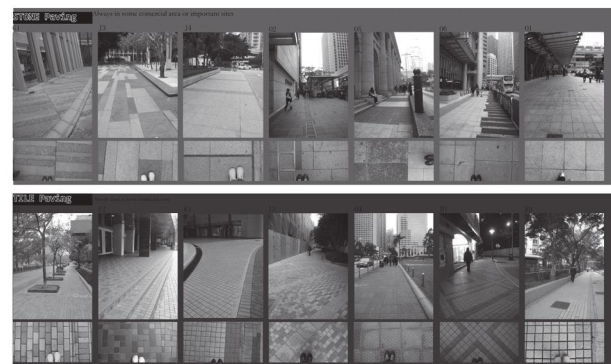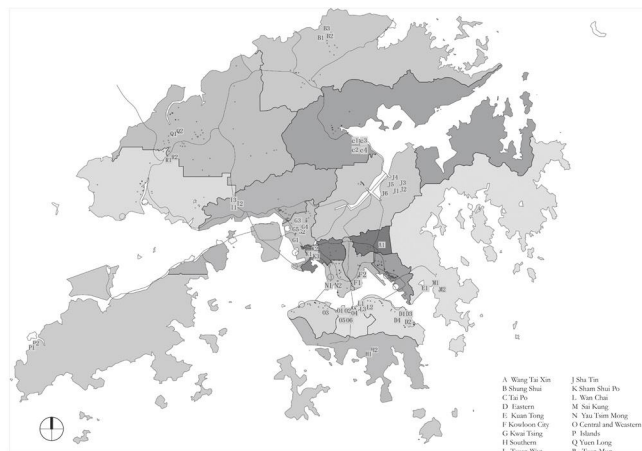
FIGURE 1 Sidewalk documentation and categories (Monica Lin)

In claiming that the designed objects that compose the vernacular, everyday landscape have the power to reveal wider infrastructural processes, it is not that objects are anthropomorphic, or are things which possess a vitality in themselves (Bennett 2010). Instead, infrastructural objects can be said to evidence human intervention in its effort to control and define landscapes and their processes. But because contingent relations characterize the operative structure of landscapes, we must examine the emergent properties, capacities, and tendencies (Delanda 2011, 3-4) of these evidentiary objects. Students and practitioners can then learn to read embedded objects as both individual insertions which act alone, but which also act in relation to their adjacent conditions, to other objects of the same kind, and to the larger systems in which they take part. It is in the taxonomic collection of similar types of urban infrastructural objects, and in the drawing of connections between them, that the analogy to an ecology presents itself, one in which typical constructed objects are adapted through iterative design processes to function within complex urban ecosystems. When viewed as infrastructural object typologies, the examination and documentation of specific instances can lead to a comprehension of a larger system and its functional, cultural, economic, and aesthetic effects, as in the case of a drain inlet acting as surface evidence of the water management system [**FIGURE 2**].

Within this ecology of objects, recognizing individual instances as evidence of action exposes both the objects themselves and the systems they evidence, uncovering opportunities for design agency. This process creates new objects and assemblies, and affects their constituent systems. Recent work to catalog objects as evidence of action, such as Linda Pollack's image matrices documenting "traces of phenomena" (Felson and Pollack 2010, 362), illustrate objects both in their real, material state as things in-themselves (that is, a curb) but also as evidencing actions which reveal processes which are often unseen, what Alexander Felson and Pollack call "a registration of forces of disturbance" (Felson and Pollack 2010, 362).

Exposing objects in relation to their historical and contemporary evidence, materiality, distribution, trajectories, and reciprocal effects upon the landscape is a common tactic within landscape urbanism literature (Belanger 2006; Corner 1999; Wall 1999; among others) and has appeared more recently in the formulations of "Landscape as Infrastructure" (Belanger 2010) and "Reciprocal Landscapes" (Hutton 2013). These formulations expose the material, political, economic, social, ecological; and cultural imprint of everyday objects on both the places from which they originate and the environments in which they are installed. In these cases, the properties of the object itself, whether pipe, stone, or asphalt,

need to be known in order to reveal its potential or virtual relation to other objects, networks and landscape processes. Grounding this movement towards an ecology of objects as evidence of infrastructural actions, work from the Division of Landscape Architecture at the University of Hong Kong demonstrates a developing pedagogy which requires the investigation, documentation, and design of urban infrastructural objects which are simultaneously embedded within and withdrawing from their complex contingent conditions. For the project "Hong Kong Detail Catalogue," students were asked to photograph, map, catalogue, research, and draw Hong Kong's everyday public infrastructural details and assemblies. After the investigation of relevant international and local case studies, each student then designed and documented a new detail assembly that improved both the functionality and aesthetic quality of one of the standard detail insertions that they studied, and by extension, the entire network of infrastructural insertions. The project was divided into four parts: (1) Typological documentation and mapping; (2) Detailed research, diagramming and drafting of construction materials, sources and construction processes; (3) Case study/precedent research; and (4) Design adaptation and composite drawing. The four parts of the project were compiled into a booklet that demonstrated the progression from the initial documentation and mapping of existing detail insertions, through to the redesign of a specific in-

sertion chosen from their original documentation of fifty instances of embedded objects [**FIGURE 2–4**].
This methodology of close observation and active engagement in specific situations allows students to link the "real" existence of objects to forces such as policy, code, construction, and material practices, and social and cultural appropriation, enabling design intervention at the scale of the object and its assembly (that is, a bus stop or a sidewalk) and with respect to the processes that the objects evidence (that is, the public transportation network). This concurrently contextual and individuated approach requires familiarization with *what exists* in order to understand how, where, and why to intervene in the urban environment. Examining objects as a practice within landscape architectural pedagogy starts with the documentation of real instances of installed objects in their situated landscape location. This "recording" engenders a larger understanding of materials, processes and networks. The pedagogical methodology creates an understanding within the landscape architectural student and future practitioner of the effect of design agency that repeatedly installs these objects as active artifacts. When objects in the landscape are seen as evidence of action, not only of the designer, the contractor, or the user, but also of the processes at work through, because, or often in spite of them, the practice of landscape architecture is enriched through the recognition that there is no singularity within the landscape. Both highly designed and typical landscapes evidence themselves as particular material or aesthetic manipulations of the application of standard details. In fact, an awareness of the importance of the standard detail is the ultimate realization. This is the realm in which landscape architecture has the greatest effect —adapting a typology to a network of particular locations and set of conditions, and through that action, creating a recognizable and influential effect on the urban landscape and built environment.
In order to teach landscape architecture students how to create the built environment, we must first teach them to conceive of the world around them, not through the imagination alone, but through an encounter with its limited multiplicity. The objects of our design, the ones that actually construct and determine our built environment, are standardized,
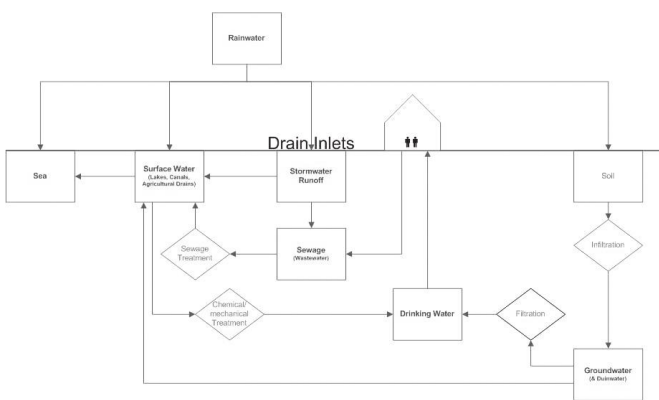
FIGURE 2 Simplified water cycle diagram (Holland)

coded, and often built to a minimum standard, but their function is essential and their effect is overwhelming in the determination of the character, use and feeling of a particular place. How do we teach students how to know when not to design, but rather to simply observe, record, listen, and deploy tools already at hand? The construction of the urban landscape is an adapted prefab assembly: the application of typologies that evidence the infrastructural actions that structure the global environment. Understanding the urban landscape as an ecology of objects can help to define and elucidate a historical trajectory of infrastructural insertions which are replicated everywhere in the world, but can be adapted to local conditions.

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MATERIALS
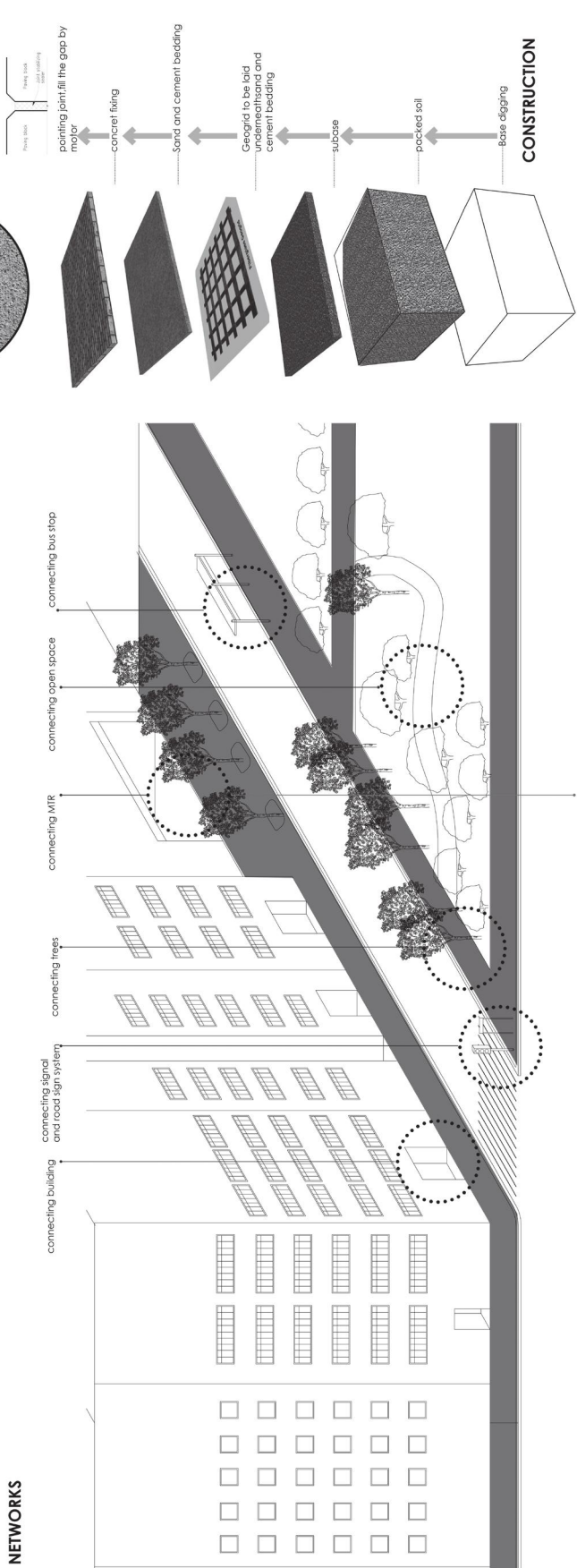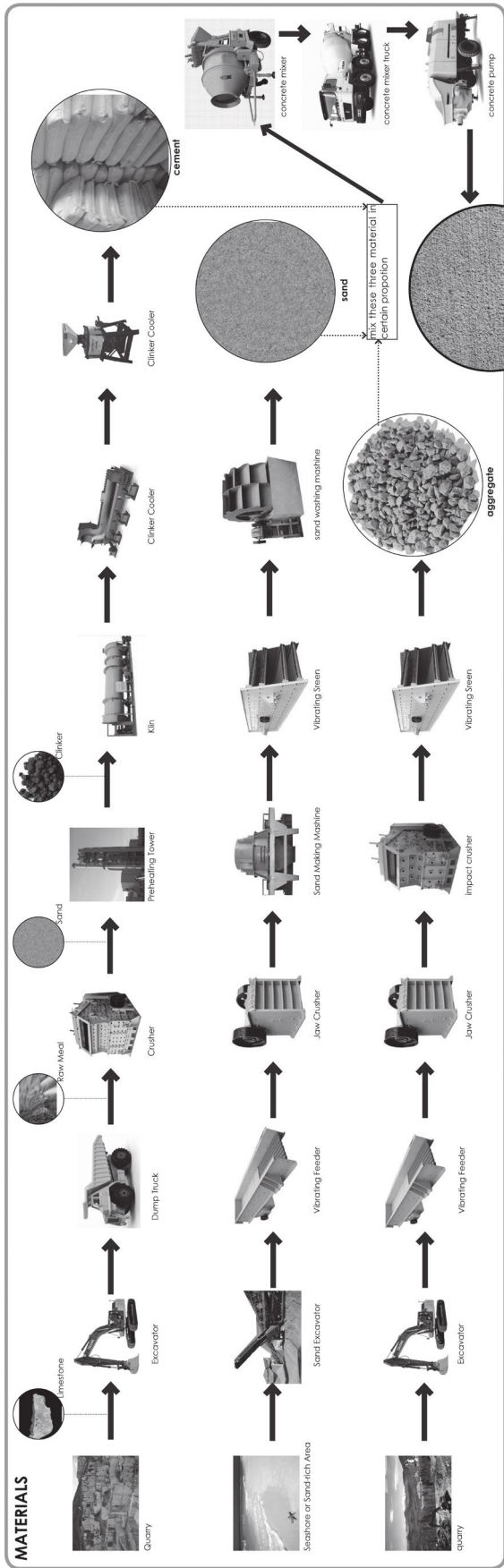
NETWORKS

FIGURE 3 Sidewalk construction, materials, and network (Monica Lin)
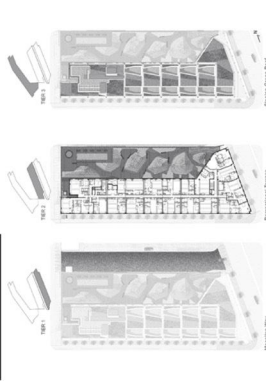
Plan 1:20

Redesign

Use the colour yellow to gray to address the changing from road to comercial street. The premeable paving, the gaps between the paving unites help to deal with the surface flow.

4 1/2" x 9" x 3"

Pave unit 1:5

Section 1-1 1:20

Permeable Paving
15 thick sand bed/sand and cement bedding
225 thick open graded subbase
Packed soil

250×125 kerb
1:3 cement m
20/20 Concr
lean concrete
Sub-base/gn
Packed soil

3D Cut Drawing
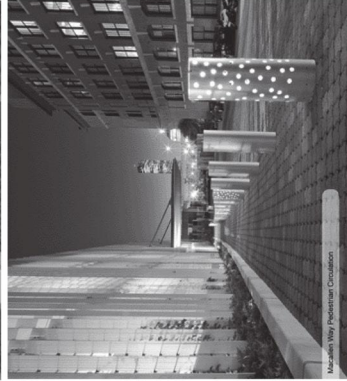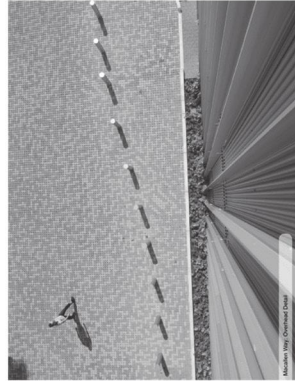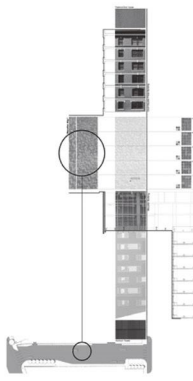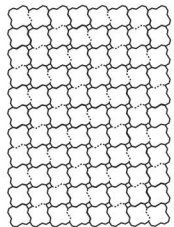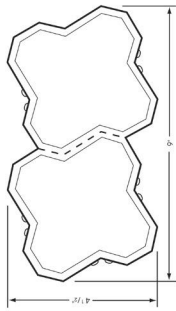
The need for a pervious concrete paving unit that allows water to permeate the soil has become increasingly important. Our municipalities now require that rain and storm water runoff be controlled and retained. Hanover's NEW Aqua-Loc® is available in a 4 1/2" x 9" x 3" unit with a score to appear as two 4 1/2", 4 1/2" x 3" pieces. Like Hanover's Aqua-Loc® interlocks for stability and provides open space for drainage aggregate. Aqua-Loc® will provide the project with 10.6% open space allowing the water to be infiltrated at a rate of 7"-8" per hour based on proper installation methods.

Aqua-Loc® is a trademark of Advanced Pavement Technology.

Hanover Permeable Paver
filled with 1/4" - 3/8" open graded stone
(AASHTO #8 or #9) 1/2" from top

2" of 1/4" - 3/8"
open graded stone
(AASHTO #8 or #9)
4" of 3/4" - 1"
open graded stone
no fines (AASHTO #57)
12" of 1 1/2" - 3"
open graded stone
no fines (AASHTO #1)

Perforated Pipe
Compacted Subgrade

Please Note: Due to variations in natural soil types, infiltration rates (Co/vis) may differ.
The detail shown above is an example of a typical permeable paver installation. Requirements and regulations are different for each municipality. Contact your municipality for specific installation instructions. An industry professional should be consulted to develop a specification for the individual project in accordance with the manufacturer's recommendations.
When Eco-Grid® will be filled with planted vegetation, the installation detail shown is not adequate. If grass is intended, a typical water infiltration (See con

Macallen Building, South Boston, MA

Landworks Studio, Inc., Boston, MA
client: Pappas Properties, Inc.

Landscape Architectural Team
Michael Bier, RLA, ASLA, Principal in Charge
Timothy Baird, RLA, ASLA, Principal & Senior Project Manager
Letitia Tormay, Project Manager
Stephen Wratt, RA, Design Staff
Christopher Macfarlane, Design Staff
Stephen Comstock, ASLA, Design Staff

Landscape Contractor
Greenscape, East Taunton, MA

At the ground-level entry — a public court dubbed Macallen Way — free planting, lighting, and a composition of paving materials structure a dialogue of literal and figural connections between the Macallen and Court Square Press Buildings, both developed by the same client. A mélange of permeable concrete pavers reconciles the material environment of the two buildings while allowing in situ infiltration of surface runoff. Through these inventive uses ordinary materials are able to keep with the contemporary image of the development.

Casestudy

SIDEWALK MLA1 Lin Junyu, Monica 2011991668
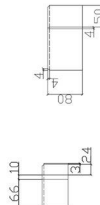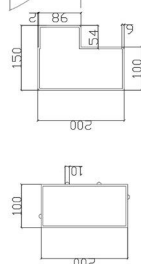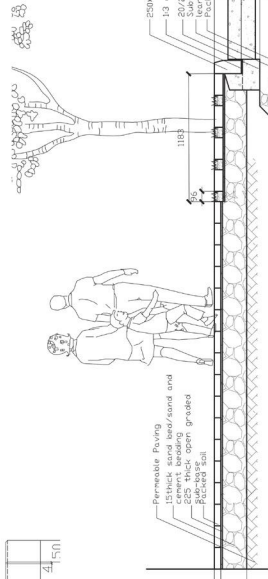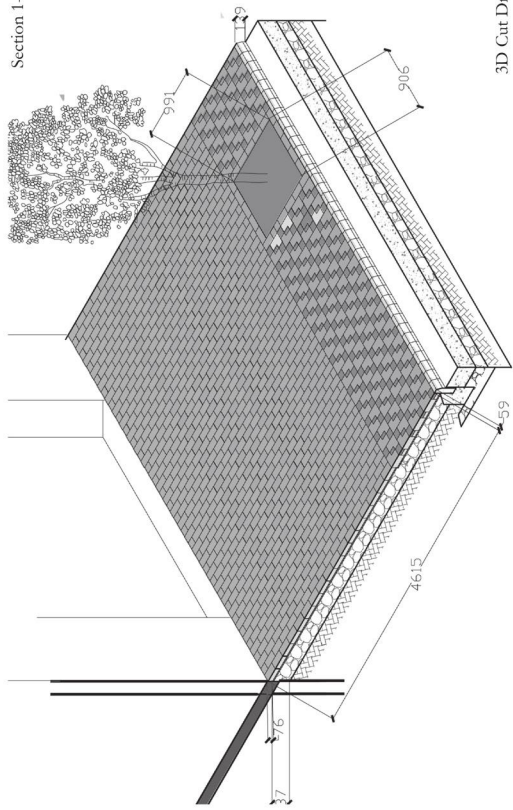
FIGURE 4 Sidewalk case study and redesign (Monica Lin)

TEACHING TIME—ON THE PRACTICE OF LANDSCAPE LABORATORIES

STEFAN DARLAN BORIS
Aarhus School of Architecture,
Urban Landscape, Denmark
stefandarlan.boris@aarch.dk

Stefan Darlan Boris (b. 1975) is educa-
ted as a landscape architect and holds
a PhD in architecture on urban forests
and Nordic garden history. He is as-
sistant professor at the Aarhus School
of Architecture, where he teaches
and carries out research in landscape
architecture. His interests range from
ecology, walking, and weather to
afforestation and wetland reclamation.
He is currently working on a research
project on urban landscapes, forests,
and dissonant heritage in the Baltic
Sea Region. Boris runs an independent
landscape architecture consultancy
besides his academic career.

"Give me a garden and I will raise the world." (A rewriting of Bruno Latour 1983). "Give me a Laboratory and I will Raise the World" (École des Mines, Paris).

INTRODUCTION

Over the last fifty years, a society made up of tangible orders with graduating borders and hierarchies has been substi-tuted by a society made up of complex functional systems, which are open and differentiated internally, but collide outwardly with each other and in many cases are unable to communicate with their surroundings. In this newly emerged urban context, landscape architectural practice needs to be broadened towards a "relational" design practice that is able to set in motion a dialogue between otherwise separate domains.

As landscape architecture was historically the developmen-tal discipline for new models of urban planning well before urban planning decided to turn itself into an autonomous discipline by abandoning the experimental laboratory of the garden; this paper calls for a return to the garden, in its broadest sense, as one such laboratory. In doing so the garden reveals itself as one of the very few places where differences of scale become irrelevant and where the content of the trials and errors made can alter the composition of society at large.

FIGURE 1 Landscape Architect Anders Busse Nielsen and students in the Landscape Laboratory at SLU, Alnarp.

THE AARHUS LANDSCAPE LABORATORY

The Aarhus School of Architecture is engaging this new urban condition through architecture. At the Department of Landscape and Urbanism we are currently developing a new landscape laboratory in collaboration with the local municipality to be used for experimenting with natural and cultural processes and change over time in relation to architectural experiments. The laboratory is in its initial phases but from its beginning has been one out of a growing network of landscape laboratories, each with their own individual strengths and weaknesses.

The landscape laboratory concept was originally introduced in Snogeholm in 1986 and Alnarp in 1991 by The Swedish University of Agriculture in Alnarp (SLU) and further developed in the laboratory of Sletten, Denmark, in the late nineteen-nineties. While Snogeholm is placed in a rural area and Alnarp is placed on the campus ground of SLU Alnarp, Sletten was established as a new urban forest in connection to housing areas in the outskirts of Holstebro. All three laboratories have been established to experiment with new forms of urban forests and the management of these. The principal idea behind the Aarhus Landscape Laboratory is also to develop a 1:1 platform where researchers, teachers, and students can meet and cooperate on the development and testing of new design concepts for establishing and

managing urban landscapes at large. The laboratory will draw upon some of the findings done in existing laboratories and function as a didactic learning space, which allows for a reflective landscape approach that, contrary to a normative landscape approach, includes the subject, which acts in the landscape and through a reflection on the experienced, sensed, and learned makes new choices and positions. This is a reflection that entails a focus on the accumulation of new knowledge through actions that unfold in the specific situations. This we expect will also open up towards a focus on a form-world, which is grounded in landscape architectural theory and history characteristic within a certain lineage of garden art and Nordic landscape architecture as described in the following in an attempt to broaden the current concept of landscape laboratory.

GARDEN EXPERIMENTS

This for instance is the case with Danish landscape architect C.Th. Sørensen, who described himself as a garden artist. He was well aware of the potentials in using the garden as a developmental laboratory, when he in 1931 proposed the first so called scrap playgrounds in Denmark. He was of the conviction that an inspiring milieu would enhance the children's possibilities to experiment with and learn about techniques, materials, and constructions, and to develop a

FIGURE 2 Children experimenting in the scrap playground of Emdrup, Copenhagen.

sense of democracy through continued negotiations with each other and the materials at hand (Sørensen 1931, 54). One of the first head masters involved in the scrap playground, John Bertelsen, described the way of working and assisting the children in their work as "scrapology" (Hagemann 2006, 5). By this he was not only referring to the use of second-hand materials, but also, and maybe even more so, to a certain way of *being in the field:* "it is very difficult to talk certain ways about *scrapology.* As it is an empirical science, one has to be in the field to get the point." (Ibid) By being in the field Bertelsen meant being where the children were and where their ideas were interpreted into a world of democratic play and dialogue. As such the scrap playgrounds were as much laboratories for learning about a democratic society with connotations to some of the most fundamental reasons to create a garden in the first place: the act of experimentation and dialogue with others and ones surroundings.

THE ECOCATHEDRAL

Although from a different starting point, Louis Le Roy's Ecocathedral in Mildam, the Netherlands, can be characterized as a landscape laboratory for the exploration of the dialogue between natural and cultural processes. For Le Roy, the Ecocathedral was a free space for the unfolding of complexity and testing of new forms of time-based design interventions in a 1:1 scale that relates to the landscape as

a specific, present material and the body in movement. He was of the conviction that any attempt to separate nature and culture in time and space would lead to an ecological imbalance. Le Roy thus considered active participation in the creation of our surroundings to be a precondition for the development of sustainable cities.

Since it's beginning in the late nineteen-sixties the Ecocathedral has developed into a non-finished, time-based experiment where nature and culture form one interwoven domain. It was built up in connection with Le Roy's recurring work on decoding, sorting and stacking second-hand building materials, which the local municipality still delivers onsite. The materials are reused in a continued expansion of the Ecocathedral where foundations, walls, plateaus, towers, and pathways function as an installed base, which turns into other functions over time: plateaus become towers that become water purification filters that become habitats for sprouting trees that define the framework for the next extension, et cetera. The Ecocathedral is thus not based on an overall plan but on returning to the site again and again with openness towards uncertainty:

"It is not a complete design; it does not have an 'ideal state' or a moment when it is finished. It is in a state of constant change and completion was not part of the planning. It is process in time and space." (Vollard 2002, 21)

If gardens at large represent a form of gathering places for people and cultural and natural processes the Ecocathedral shows that this power of gathering is to a large extent about

FIGURE 3 Stacked tower in the Ecocathedral, Mildam

exchanging points of view. It explains why the Ecocathedral is not only a place for dialogue but can be associated explicitly with the ideal of dialogue itself, as one needs to learn the language in terms of which living things are organized, in order to speak the world not as discrete things, but as dynamic relations, and to practice the art of managing complex, living systems (Bateson quoted in Spirn 2000, 25). Many of the principles developed in the laboratory of the Ecocathedral have been utilized in the housing area of Lewenborg near Groningen, which was one of the initial projects involving Le Roy. Here the inhabitants are free to participate in the continued development of the area much in the same way as Sletten. This has led to both successful and contested areas intertwined with each other, which in turn, potentially, can form the knowledge base for future urban housing projects.

THE AIRE LABORATORY

This is also the case of ADR Architect's and Georges Descombe's ongoing re-naturalization of the Aire River outside Geneva, Switzerland, which they, despite its length of five kilometers, describe as a garden project. A garden, which is located in the valley where Descombes as part of CREX (Centre for Architectural Research and Experiments) in the early nineteen-eighties developed the handful of garden installations found in Park en Sauvy (Descombes 1988, 13). The main intention with CREX was to develop architectural

education through the realization of very small things: furniture, ephemeral objects built in collaboration with the users, temporary installations, et cetera. It functioned as a test-bed for skills, techniques, and theoretical instruments, which today are among the most original of Geneva's architectural milieu (Marot 2004, 59).

The experimental approach utilized in CREX is also introduced in the Aire River project, which is currently in its third out of four phases. Initially the design team studied the entire length of the project area, but at the same time designed in greater detail an experimental segment to be realized within the first few months of design. Here they tested the possibilities for the larger site as well as the conditions for its realization in a larger context (Descombes 2009, 126). As Anne Whiston Spirn, in her seminal book *The Language of Landscape* (2000), reminds us, the word "context" derives from the Latin word *contexere*, or to *weave*. In that way context has an active root that belies its static common meaning: "A river, flowing, is context for water, sand, fish, and fishermen; flooding and ebbing, it shapes bars, banks, and valley." (Spirn 2000, 133).

What ADR Architects and Descombes are aiming at by approaching the river project as a garden is, in the words of British writer-extraordinaire late Roger Deakin, "not to find their way but to get lost; to loose them selves in the changing landscape of the river" (Deakin 1999, 51). The result is that the realizations, which ADR Architects and Georges

FIGURE 4 The garden of the Aire Rive, Geneva

Descombes have introduced along the river are like fragments of a three-dimensional map of the site's territorial substrate; a map addressed not to the bird's-eye view, but to the thinking body of the walker, engaged in the breadth and depth of the territory (Marot 2004, 74). This way of engaging critically in landscape architectural projects as laboratories for the development of new tools and skills, can be described not as a "reflection-on-practice," but more so as a "reflection-in-practice," a *thinking-with-ones-feet* (Schön 1983).

LAB-POSITIONING

Bruno Latour reminds us that if we are not able to follow up our studies inside the walls of laboratories far enough to take into account questions *outside* the laboratory, we are at great risk of falling back into what he describes as an internalist vision of science (Latour 1983, 152). He proposes to not focus on the laboratory itself but on the construction of the laboratory and on its position in the societal milieu as seen in the presented landscape laboratories. They illustrate that the very difference between the "inside" and the "outside," and the difference of scale between "micro" and "macro" levels, is precisely what laboratories are built to destabilize (Latour 1983, 154).

This process of destabilizing dichotomies is one reason for establishing the Aarhus Landscape Laboratory and for landscape architects to return to the long-neglected discipline of suburban studies derived from garden art. Here certain

landscape architects linked by their tradition and professional culture to the middle suburban zone—the birthplace of their discipline—are among a very few people today capable of revealing the rich complexity of sites and situations where other specialists see only chaos (Marot 2004).

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BEST PRACTICE LANDSCAPE ARCHITECTURE
LANDSCAPE ARCHITECTURE HERITAGE

COMMENT BY KARSTEN JØRGENSEN, ÅS

The heritage of landscape architecture, as a modernist profession dating from the late nineteenth century, has been only discussed to a limited extent in regards a preservation and management program that is focused primarily on its historical values. The profession of landscape architecture is relatively young, and the subject is by nature dynamic, so the focus has until now mainly on new development and management to accommodate new requirements by a changing society. But recently this has changed: a growing self-consciousness in the profession has turned the attention towards the roots of the profession and towards the needs for protection of its heritage. The Woodland Cemetery in Stockholm is among the very few examples of a World Heritage listed site with a pronounced modernist expression where the designed landscape is the main motivation for the inscription in 1994. This example stands as a symbol and a flagship of this development, but many more examples are now being managed at different levels, and in many countries efforts are being made to set up inventories and develop management plans to meet the growing demand and awareness.

KARSTEN JØRGENSEN

a professor at the Department of Landscape Architecture and Spatial Planning at Norwegian University of Life Sciences, and holds a Dr.Sc. degree from UMB in landscape architecture. He is founding editor of the *Journal of Landscape Architecture* (JoLA), established in 2006. Karsten Jørgensen has published regularly in national and international journals and books.

In the session at the ECLAS Conference, a number of such examples were presented and discussed. Katarina Kristianova (from the Slovak University of Technology, Bratislava) showed in her presentation how the Modern Movement was expressed in interwar spas and bath complexes, and especially how the gardens of such complexes tend to be ignored in the renovation processes, even if they represent important achievements in modernist heritage, for example in their in their connections between the exterior and the interior, and also as monuments of the young Czechoslovak Republic. Lisa Diedrich (from the Swedish University of Agricultural Sciences) focused on translation as a metaphor for transformative design, especially of former industrial sites. Instead of erasing the existing structures of an abandoned site when making a new design, design as translation offers the opportunity to consciously deal with the palimpsest of landscape and include the heritage of a site in multiple ways. Ana Luisa Soares (from the Centro Ecologico Aplicada in Lisbon) presented an inventory of Lisbon gardens that have been included in the city's official cultural heritage. The inventory is an important first step towards a sustainable management of this heritage. Thomas Juel Clemmensen (from Aarhus School of Architecture in Denmark) presented a study of two nature restoration projects carried out with two different approaches to what nature is. The authoritative approach implemented at Skjern River in Denmark was contracted to a more inclusive approach at the project at l'Aire near Geneva. It became evident by this comparison that in terms of sustainability, the latter approach, accommodating for multiple readings of the landscape as culture and nature was clearly superior to the former one, which was based on one dominant reading of the landscape as untouched nature. Finally the session was closed with a presentation of the Japanese Garden at Cowra, by Olga Blacha (from the University of Canberra). This garden is the Centre of Japanese Cultural Heritage in Australia, and also a memorial of hundreds of Japanese prisoners of war who were killed following a mass breakout attempt during the Second World War.

The time did not allow for a final discussion, but the session nevertheless demonstrated a wide range of landscape heritage projects were the landscape approach was crucial to the project development.

WHAT VISIONS GUIDE US WHEN WE SEEK TO PRESERVE AND CHERISH NATURAL AND CULTURAL LANDSCAPES?

OLGA LEONI BLACHA
University Of Canberra,
Faculty of Arts and Design, Australia
giantlily@mail.com

Olga Leoni Blacha holds a MA Landscape Architecture (University of Canberra), MA Design (UTS), Grad Dip Communications (UTS), B.E.D Art, Cert IV Horticulture, IT, Training (TAFE), and Systems Analysis and Design (CERT). In 2004, she started a wholesale native plant nursery in Somersby (Central Coast) NSW, Australia called Sustainable Natives. In this business Blacha grows native plants including bushfoods, where she collects seed from the local Hawkesbury Sandstone landscape and design gardens for retail and commercial jobs. She became involved with landscape architecture, when she realized that not enough attention was paid to plant selection and placement of plants, and realized that this was the task of trained landscape architects. Blacha´s goal is to generate a landscape practice that adopts a heritage framework with ecological and botanical aspects.

ABSTRACT

Japanese Gardens invoke a particular cultural vision and spatial typology, as well as exclude through the articulation of otherness. This paper will examine a set of values through an Australian heritage framework to determine the thresholds of significance of the Japanese Garden at the Cowra NSW site (1977–1986).

Heritage criteria are part of a vision to conserve the site; identifying key values in a multicultural rich landscape, with dual aesthetic discourses in reading landscapes, requires further research on the social issues of war and death and the Australia/Japan relationship around World War II. The Stroll Garden design fabric in this case, is presented as a commemorative garden, predicated on reciprocal social gestures of good will, peace, and reconciliation.

Recounting the story of the "Cowra Breakout," Don Kibbler who saw the vision to reality, Japanese landscape architect Ken Nakajima (1914–2000), and the history of the Japanese Stroll Garden reveals how culture is shaped and an emerging Australian identity is disclosed.

SITE DETAILS

The Japanese Gardens at Cowra, at 4.8 hectares is the largest in the southern hemisphere, is located at Binni Creek Road, 317 kilometers central west of Sydney. The garden
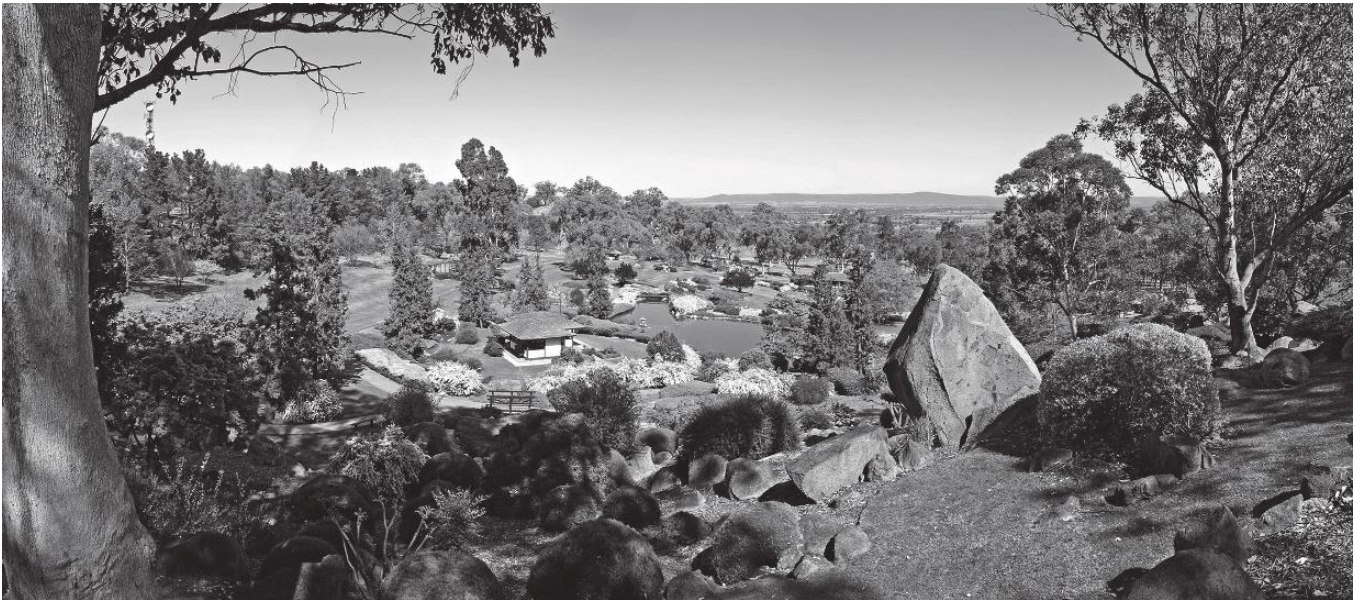
FIGURE 1 View from the sacred rocks facing Tokyo. Panorama (2006) (Source: http://www.all-hd-wallpapers.com/wallpaper/nature/free-hdwallpaper/203616)

is positioned directly west of the Japanese Cemetery (ceded to the Japanese in 1963) and the Prisoner of War (POW) Camp [FIGURE 2], and offers a landscape scattered with remnants of wartime state-controlled relics, located across from the cemetery. Constructed mainly from funds sourced from Japan, it is the first stroll (Kaiyushiki) garden in Australasia and the only stroll garden in the world initiated by local residents outside of Japan.

HERITAGE SIGNIFICANCE

The heritage conservation process has established concepts and language. "Heritage" is a professional discourse used for managing information for and of site listings. In dealing with identifying specific cultural significance, the Australian equivalent is the Burra Charter (1999). It goes by the name of "The Australian International Council on Monuments and Sites, Charter for Places of Cultural Significance with associated Guidelines and Code on the Ethics of Co-existence" (ICOMOS) and has developed principles detailed in the Venice Charter (1964) to suit local Australian requirements. For Australia, ICOMOS the cultural significance is the aesthetic, historic, scientific, social, or spiritual value for past, present, or future generations. Cultural significance is "embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places, and related objects. It

is important to remember that places may have a range of values for different individuals or groups."

The Japanese Garden at Cowra can be considered for local, state, national, or world heritage, with political factors influencing such a listing; the Cowra POW Camp site is NSW State heritage listed, sharing a common history. The site is a known tourist attraction outside of the Shire, attracting visitors from abroad. The Garden is assessed against criteria to determine its heritage value. To reach the threshold for the National Heritage Listing, a place must have "outstanding" heritage value to the nation.

Eight nationally approved criteria in the model referenced as HERCON (National Environment Convention) from a 1998 agreement include: the site has outstanding heritage value to the nation because of its potential to yield information that will contribute to an understanding of Australia's natural or cultural history. The criteria act guides natural and cultural landscapes for future benefit via a mechanism of conservation.

The Japanese Garden at Cowra is an important cultural landscape that represents diversity and should be cherished, as it embraces the traditional stroll garden design by the acclaimed Japanese landscape architect Ken Nakajima, who designed the 1973 Hamburg International Horticulture Fair Japanese garden (IGA Fair). This design was difficult

FIGURE 2 The detailed plan locating the position of the Japanese Garden in relation to the Cowra Prisoner of War Camp. Australian Government, Department of the Environment, Australian Heritage Database (source: http://environment.gov.au, accessed 2010).

to attribute to Nakajima, due to limited recorded information and signage. Nakajima designed the Japanese Friendship Garden at Balboa Park, San Diego, altered with limited documentation, which in 2012 was redeveloped. This impacted the garden's authenticity, which stresses a need for heritage systems.

Ken Nakajima was a decorated Living Treasure in Japan, for contributions to cultural exchange through garden landscaping in 1986 for his works in Moscow, Houston, Vienna, Montreal, and Rome.

WHAT HISTORICAL REFERENCES CAN BE IDENTIFIED AT COWRA TO HIGHLIGHT THE JAPANESE GARDEN'S OUTSTANDING VALUES?

It commemorates an historical moment of the Second World War at the (POW) camp known as the Cowra Breakout. The Cowra/Japanese relationship was galvanized on August 5, 1944, when over 1000 Japanese prisoners tried to escape the camp less than two kilometers from the Garden site. Two hundred thirty-one Japanese interned soldiers died escaping and were buried nearby, with local members of the Returned Serviceman's League (RSL) tending their graves. Japanese Camp survivors refused capture, because the shame was so great that death was a relief, as they were "already dead" in their minds. No documents exist of POW survivors

and their stories in Japan. Masaru Moriki, an ex-POW at Cowra, says it is the place where he was reborn and is his other home. Being a prisoner was shameful to many Japanese, but Moriki and his comrades came to recognize that they had undertaken a journey from shame to pride. Moriki stated, "I am tied by a spiritual cord to Cowra and each time I go back I report to my fallen comrades" (Gordon 1994).

A COMMEMORATIVE GARDEN FOR ENTRY TO YOMI; THE SPIRITUAL LANDSCAPE.

A stroll garden based on traditional design elements assisted the POW lost souls with a familiar transformative place in life to death, offering the deceased Japanese POW soldiers a "hospice" or respite for that journey. The traditional Japanese rituals of mourning have been recast in the garden at Cowra's commemorative setting, allowing passage to Yomi and simulating geography that is confined in a conventional stroll garden. This allows the POW's souls killed during the Cowra Outbreak a homeward passage via the Yasukuni Jinja (keep-nation shrine).

In the Shintoism (the way of the gods) religion, based on animism, or harmony of humans with nature; it is understandable why the Cowra garden is so significant. It is a horticultural map of Japan and a spiritual resting place for the Japanese soldiers held in Cowra after WWII).

THE VALUE OF NATURAL LANDSCAPE

The rock formation represents Japanese mountains; waters flowing from rocks symbolize mountain streams; in the upper lake, the inland waters to the lower stream and curved hedges simulate rolling hills. Nakajima described it as "a piece of Japan where the spirits of the Japanese soldiers reside together with the Australians, in order to maintain peace and prosperity and to guard Cowra forever."
Ken Nakajima died in 2000, on his wish, his ashes were scattered over these sacred rocks at Cowra. The highest position or "the Mountain" viewed north west facing Tokyo, from the two large existing granite boulders/rocks "*shugoseki*" or "*shugu seki*" (Guardian City or saint), or upright rock (immovable Guardian stone), and "*Yokeseki*" or "*Yoko seki*" (spirit of the gods stepping stone, or Guardian Deity) is the large flat top rock, where god descends to earth. [FIGURE 1]
The rocks as sacred, is reminiscent of Seneca, a Roman philosopher who believed altars should be constructed on or around springs, because natural powers would produce agelessness, as the fountain of Pon Lai and Mount Lao Shan. Nakajima knew of the sacredness of the rock/spring combination, and placed at the base of Shugoseki the stream that feeds the upper pond or "*Heiwa*."
The Achi Shrine in Kurashiki (Okayama prefecture) is a prehistoric rock group on the summit of Tsurugatayama, and venerated; imbued with shimenawa (sacred presence) These rocks are reminiscent to Cowra. No other pairing can be found in Japan, or any Japanese Garden. Nakajima believed he was guided by "divine providence" to the site that contained this rock formation. "It was mystifying finding two such rocks. It must be a reward for the good deeds performed by the citizens of Cowra," the collective memory with historical associations for this public space commemorates not war, but an act of "good will" that signaled changes in the Australian psyche and to see a greater good in people and forgive misguided deeds.
The garden avoids allegiances as seen in World War II memorials, noted in the Cowra/Bathurst shires, with encryptions such as, "lest we forget," the "diggers," "the dead," "the Australians fallen," and "to the Queen." It more refers to a knowledge that we are all people, and that by removing the borders, we understand that there are families who hurt as much as any other.
The commemorative garden—designed for the Japanese soldiers fallen on Australian soil and Australian soldiers killed at the Outbreak—symbolizes a return to nature in the form of gum trees and their stoic presence. No monument, or sculpture, or pedestal is used, you instead traverse through it, a cycle of life on earth.

DON KIBBLER AM, THE CHAMPION OF THE GARDEN, AND VALUED CULTURAL VISIONARY

In 1970, Don Kibbler's involvement of the garden started with the Cowra Tourism Office. He wanted to promote the Japanese War Cemetery as a unique spot in Australia and a Japanese Garden as being worthy of a memorial comparable with a machine gun tower, or a re-creation of the Breakout. In 1976, Don Kibbler helped in discussions with the Japanese Ambassador to Australia, learnt Japanese to better assist Ken Nakajima, and was the go-to chairman. Don Kibbler absorbed the Japanese culture, customs, and language. He also secured key funding contacts and a trust fund to ensure the garden prosperity. Eric Wolf (1982) stated that, "A culture is thus better seen as a series of processes that construct, reconstruct, and dismantle cultural materials." Cultures appear more fluid and changeable than ever before. People are no longer stereotyped as passive recipients of culture or inheritors rather as active owners and possible modifiers of culture. Kibbler modified the culture of Cowra, through his entrepreneurial skills by using the garden as a vehicle for promotion.

HISTORIC VISIONS, INCLUDING THE DEVELOPMENT OF BONSAI, AND THE IDEAL OF MINIATURIZATION WHICH LED TO THE FORMATION OF THE JAPANESE STROLL GARDEN STYLE

The Japanese design ancestry is cultivated from Neolithic Chinese origins, of which the Japanese palette developed, and inspired by the unique methods used by the Chinese to prune and shape trees, as evident in current bonsai. Bonsai was influenced by "penjing," where an entire world be contained within a small area, even as miniaturized as a small shallow dish, and that each item in the garden was imbued by both spiritual, representational, and symbolic meaning. The novel *Utsubo Monogatari* (The Tale of the Hollow Tree) from the tenth century suggests bonsai was quickly assimilated into Japanese culture, noting, "A tree that is left growing in its natural state is a crude thing. It is only when it is kept close to human beings who fashion it with loving care that its shape and style acquire the ability to move one."
The bonsai development resembles maturation in Japan itself with Kokan Shiren, who in 1300 wrote the essay, "Bonseki no Fu" (Tribute to Bonseki) that outlines the aesthetic principles affecting not just Bonsai and Bonseki, but garden architecture as well, as a Bonsai growing literally to the size of a large pot or *hachi-no-ki*. Kokan Shiren was a Japanese Rinzai Zen patriarch and Chinese poet, who suggested the relationships of proportion with miniaturization, asymmetry/asperity, concealment (no trace of the designers touch noticeable), and poignancy expressing *wabi-sabi* (aesthetic acceptance of transience, embracing impermanence, imperfection, and incompleteness), or aspects of *mono no aware*.
Most Japanese garden designs follows four main principles: nature, geomancy, system of taboos, and Buddhism. These principles are described in a book called *Sakuteiki*. This vision of the natural world was adopted by Buddhists who co-existed alongside Tao, using natural imagery of that religion to develop gardens as examples of heaven on earth.

Standard stroll garden design evokes simplicity and achievement of "nothingness" or *mu*. This *mu*, formulated from emulating nature, ideally captures nature's principles and replicating that in miniature. If everything works in harmony, nothing should fail, but follow nature's way.

Adopting a popular 1800s traditional stroll garden style, produced from an assemblage of previous designs into an all-inclusive style. The stroll garden (*Kaiyushiki*) incorporates a tea garden (*cha-niwa or roji*), a dry, Zen, or rock garden (*Karesansui*), and a pond garden (*Chisen Kaiyu Shiki*). The stroll or excursionist garden uses paths designed around a pond controlled by the designer, modifying the walking speed and controlling what one sees through a series of "hide and reveal" techniques, thereby enhancing the experience and sense perceptions via a rich, immersive experience. Aesthetic elements used include asymmetry, asperity, austerity, modesty, economy, simplicity, intimacy, and the ability to appreciate ingenuous forms produced in gardens through a combination of nature and natural objects. These are then processed through manipulations, displacement, and selection, producing an integrated design.

Some Japanese Buddhist beliefs and aesthetic elements have Western equivalents of "nothingness" or "enlightenment" that are integrated into the landscape discourse at Cowra. Kitaro Nishida suggests that the ability of self-negation (nothingness) produces a space in which true intercultural encounter can take place is.

VALUING THE CULTURAL EXCHANGE AND THE CONTRIBUTION OF LANGUAGE

Certain issues arise in examining possible interchangeable terms, where Westernized aesthetic systems could overpower the Eastern aesthetic, simply due to the language used in construction. A method of avoiding this situation is the inclusion of "cultural terms" defined from the originating culture. Nakajima and Kibbler—in promoting mutual friendship and understanding between the cultures employed education, and by using simple signs and recordings explaining key symbolic and design terms—offered the public the valued information. J. Clancy (2003) noted that, "The role of the viewer, the person experiencing the phenomenon of the garden experience's the culture of the garden based on their lens of knowledge." Elizabeth Colson notes that, "Each generation

to some extent reinterprets the historical space of the preceding generation(s) rather than taking it as given." This draws on the understanding that individual generations, or age-cohorts, have different experiences of history.

CONCLUSION

The interaction of culture, time, and geographical space makes the Japanese garden at Cowra an outstanding site worthy of heritage listing. It defines a new road in the Australian landscape, where the possibilities of making a unique landscape discourse that is grounded in another's history, of a peaceful solution produced from manipulations of culture, time, and geography become a path to promote reconciliation. But its importance as a historical site, its story bound to the POW Camp, is present but not shaped by that alone. The garden can be viewed as something other than a commemorative site, it can be seen in reference as a new frontier for Australian landscape design, with many possible opportunities in the broadening Australian/Asian context.

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DESIGN AS TRANSLATION—
SITE-SPECIFIC HARBOR TRANSFORMATION IN EUROPE

LISA DIEDRICH
Swedish University of Agricultural Sciences, Department of Landscape Architecture, Planning and Management, Sweden
lisa.diedrich@slu.se

Lisa Diedrich, born 1965, studied architecture and urbanism in Paris, Marseille, and Stuttgart, and science journalism in Berlin, specializing in contemporary European landscape architecture. From 1993 to 2000 she was an editor of *Topos European Landscape Magazine*. From 2000 to 2006 she worked as personal consultant to Munich's chief architect at the city's public construction department. Since 2007 she has been dedicating her career to academia, working for universities in Germany, the Netherlands, Spain, Italy, Great Britain, Denmark, and Australia. Since 2012 she has been a professor of landscape architecture at the Swedish University of Agricultural Sciences in Alnarp. Since 2006, she has also been running her own consultancy in Munich, working as editor-in-chief of the book series *Landscape Architecture Europe (Fieldwork/On Site/In Touch)* and of *'scape* the international magazine for landscape architecture and urbanism.

post-industrial landscapes / harbor transformation / site-specificity / design understanding / translation

Harbor cities are particularly exposed to the effects of globalization, shifting technologies, and distribution logics. Port authorities develop new container terminals and logistic facilities on better suited grounds, while leaving behind vast industrially built-up areas, which are often redeveloped by the respective cities. Over the last three decades many harbor areas have been transformed in Europe, in cities and landscapes as different from each other as Oslo and Nantes, or Lisbon and Rotterdam. However, many a harbor transformation looks the same, featuring a numbing homogeneity of shopping centers, luxury housing, office complexes, leisure facilities, erected on the tabula rasa of former port grounds. From a landscape architectural perspective, the question arises as to whether there are any site-specific alternatives, any harbor transformation projects that would enhance the specific qualities of harbor sites? If so, do they build upon a particular site-specific design approach?
In the context of my PhD research on current design-oriented European harbor transformations I have detected a series of alternative examples. When investigating these projects,
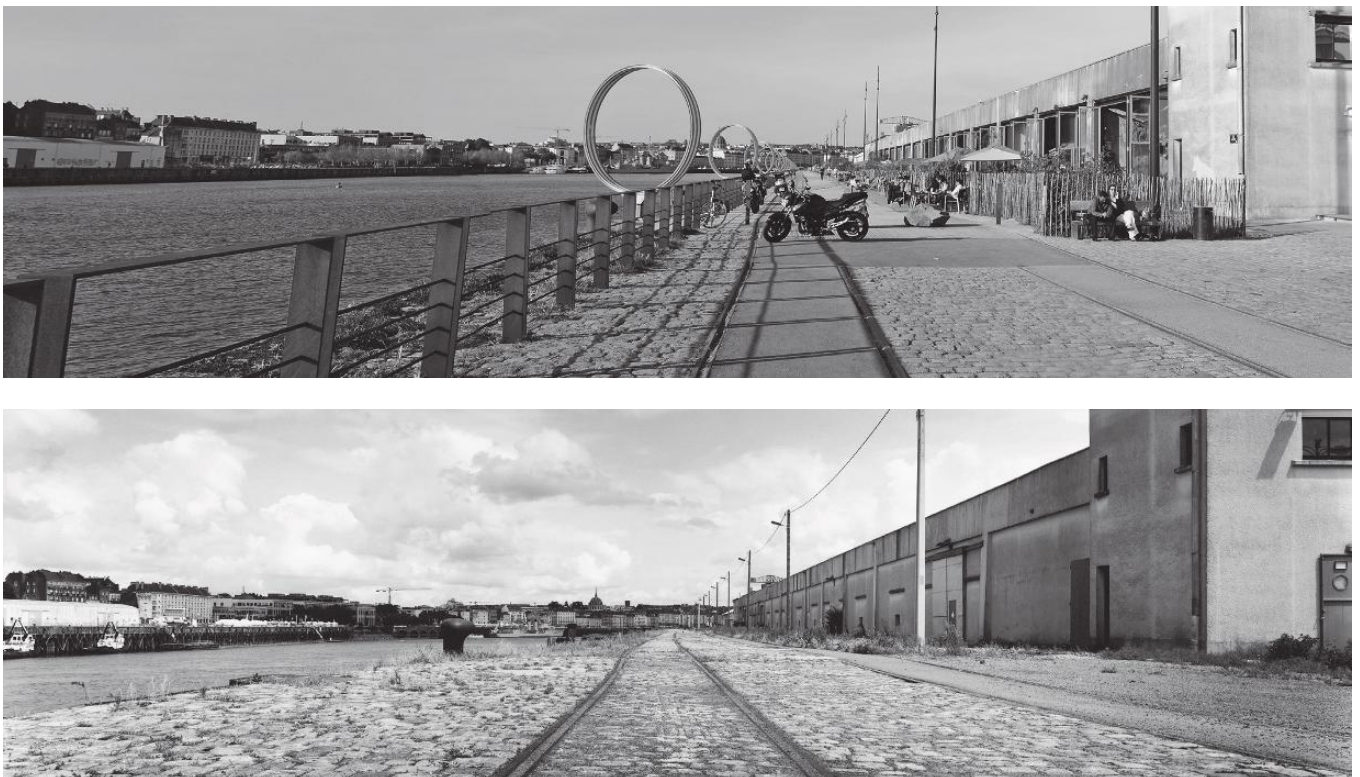
FIGURE 1A + B Alexandre Chemetoff/Atelier de 'ille de Nantes: harbor transformation at Quai des Antilles before and after intervention (photos: SAMOA)

I understand that there is not one site-specific design approach, but different understandings of site and design that enable designers to work site-specifically in a range of ways.

SITE AS CONSTRUCTION

The design disciplines have been evolving theories about site and related terms since the beginning of the post-modern era. I propose to overcome two still widely accepted positions, based on essentialist and positivistic thinking respectively. They refer to ideas of genius loci, place, identity, context, (critical) regionalism on the one hand (for example Norberg-Schulz 1979; Frampton 1983), and on landscape analysis, landscape ecology, the retrieval of facts and figures on the other hand (for example McHarg 1969; Koolhaas 1995; MVRDV 1999). In my research I explore a new strand of thinking that supports designerly ways of addressing site actively and deliberately. This third position retains the local in its focus but avoids essentialist and positivistic traps while being constructivist and non-deterministic (Braae and Diedrich 2012).

The American researchers Carol Burns and Andrea Kahn, who have introduced this understanding into the design disciplines of architecture, landscape architecture, urban design, and urban planning, define site as a dynamic relational construct. Site is construed and constructed from an exchange between what designers see in front of them and what they wish to have there, between ideas from outside (the physical site) and inside (disciplinary norms, personal convictions, societal ideas), between the real as observed and the real as defined. Burns and Kahn distinguish between "site thinking" —a mindset that is general and proper to every discipline or designer—and "thinking about a site": thoughts about a concrete plot of land in its physical condition. They argue that, "a specific locale provides the material ground for action in design practice, and the designers' ideas about site provide a theoretical background against which design actions are taken" (Buns and Kahn 2005, viii). Relying on this approach, I assume that design researchers can learn about the designers' general "site thinking" through the analysis of their particular "thinking about a site," that is, through the study of their design projects (Braae and Diedrich 2012, 22–24). To stress site as a dynamic relational construct, I separate the designers' thinking into two mental moves, namely their apprehension of a site and their imagined or realized transformation of it. If in a designer's project these two have nothing to do with each other, I can confirm that this project does not pay attention to the site as it was given to the designer, as a locale with existing qualities, and I do not label it site-specific. Invoking a metaphor out of the linguistic realm, I call the apprehension of site "site reading" and the

FIGURE 2A + B Alexandre Chemetoff/Atelier de 'ille de Nantes: Plan & Guide Map for the Ile de Nantes, a double drawing consisting of survey and transformation (drawings: Atelier de 'ille)

transformation "site editing." In so doing, I intentionally avoid speaking of "site writing," which has associations with the activity of writing on a blank sheet of paper and would therefore contradict the point of departure of the analysis— sites that feature existing qualities. The term "site editing" should conjure not such editing in which the last commas are introduced into a written text, but rather where a given text is further developed—in the case of studying harbor transformation projects, where a harbor with its existing qualities is transformed [**FIGURE 1A + B + 2A + B**].

In the harbor transformation project of Nantes, for example, the designers start from a meticulous site survey, intending to keep as much as possible of the existing materials, be they entire buildings of the old shipyard or the nineteen-sixties housing area, mere ground cover materials like contemporary asphalt and historic cobble stones, or the pioneer vegetation on the slipways of the heavily built-up river banks. They discover these materials as site values they want to enhance instead of replacing them by a new design, and accordingly their design project proposes a site that remains materially almost unchanged. Their site reading is therefore crucial for their editing of the site, and it stands exemplary for what site editing is meant to express here, and how the detected close relationship between the designers' reading and their editing allows us to identify their project as site-

specific [**FIGURE 1 + 2**] (Diedrich 2013, 163-221). The analytical framework for such a design project scrutiny is synthesized in an "interpretation tool" along a set of filters (Diedrich 2013, 90-95), allowing the design researcher to study the designers' site reading separately from the designers' site editing, to understand their relationship and conclude on the project's site specificity [**TABLE 1**].

DESIGN AS TRANSFORMATION

To understand the designers' site editing—that part of the work with a site that is commonly associated with design, I will introduce a particular understanding of design, namely as transformation of that which already exists, as opposed to the still prevalent architectural concept of design as creation *ex novo.*

From a design perspective, transformation involves a change of something from one state to another. Danish landscape architect and scholar Ellen Braae acknowledges that neither state is static, and that in fact the former "something" of the transformation is related to the new "something else." The art of transformation is basically hermeneutic and closely linked to the existent, and hence indirectly involves theories of preservation in these discussions as well as the question about the relationships between past, present and future. Even though the above definition of transformation
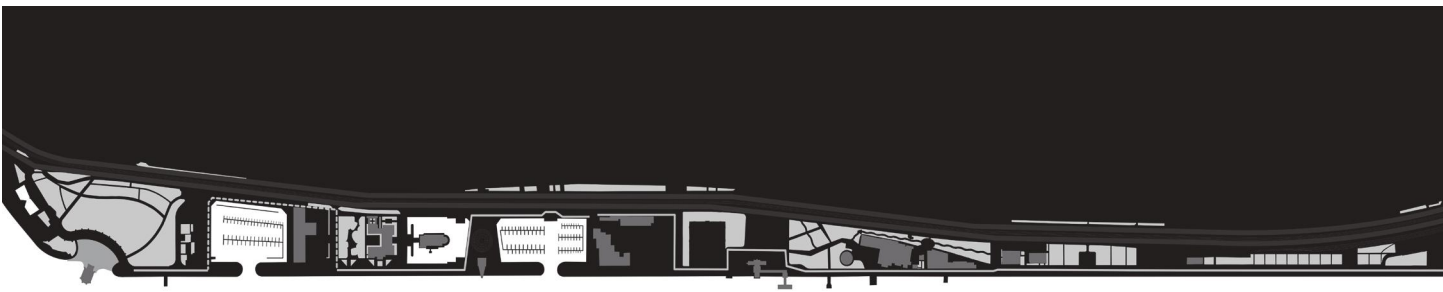
FIGURE 3 Global/P01: Itinerary of the Tagus Cycle Track in Lisbon (drawing: Global/P01)

Site as construction		Design as transformation		Site specificity as double play
THE DESIGNERS' READING		**THE DESIGNERS' EDITING**		**THE PROJECT'S SITE SPECIFICITY**
comprehensive analysis through reading filters:		comprehensive analysis through editing filters:		
				oscillation
				radicantity
physical	**structures**	translation	**domestication**	
	materials		**foreignisation**	
dynamic	**processes**	intervention	**connectivity**	
	practices		**appropriation**	
immaterial	**memories**			
	atmospheres			
	discourses			
SYNTHESIS: THE PROJECT'S NARRATIVE		**SYNTHESIS: THE PROJECT'S TRANSLATION AND INTERVENTION MODES**		**CONCLUSION: THE PROJECT'S OSCILLATION AND RADICANTITY**

TABLE 1 Interpretation tool for disclosing and evaluating site specificity in contemporary harbor transformation projects (source: Diedrich 2013)

may seem well known, it differs fundamentally from the methodological basis on which architecture—historically constitutive for landscape architecture and urban planning practices—has been grounded since the Renaissance, and hence it also differs from traditional design practice as it was understood throughout most of the twentieth century. Following this line of thought, the dominant conception of architecture and, hence, of design is connected with creating new forms; architecture is an assemblage of ideas, desires, and activities that constitutes a driving core of western culture and what we have come to know as "progress." Design is an act taking place in a remote media in terms of character, scale and geography, and it is handled by means closely linked to the development of the perspective as a visual and graphical way of perceiving and representing the world (Bek 2010). The resulting diagrams—plan, section, and perspective—provide, on the one hand, a privileged viewing angle, and on the other, constitute a matrix for thinking about and producing architecture; they entail a certain working method. Creation as an act of design implies a clear start—constructing a representation of the project in mind on a blank sheet of paper. The project hence fully reflects the in–tentions of the author in terms of originality and is ideally an entity of its own right: an *oeuvre* (Braae and Diedrich 2012, 24). Transformation, conversely, takes the existent as its point of departure and oscillates between finding out what is there and testing what it could become; the reading and the writing are two reflexive and mutually constituting processes. This double reflex can be understood as creative engagement in the site by means of intervention. These interventions can be designed as additions, subtractions, superimpositions, détournements, et cetera, and their presence and impact can vary from hardly anything to an almost complete makeover. While the traditional design act is associated with originality, with creating "the new," novelty in transformation is rather associated with the ability to create a dialogue with that which already exists on a site, and depends on site-related knowledge. Within transformation the existent becomes the main driver, and design thus becomes a hermeneutic agency privileging a conception of novelty in the sense that it focuses on creating new perceptions of the existent rather than an ex nihilo creation of new objects (Braae and Diedrich 2012, 24).
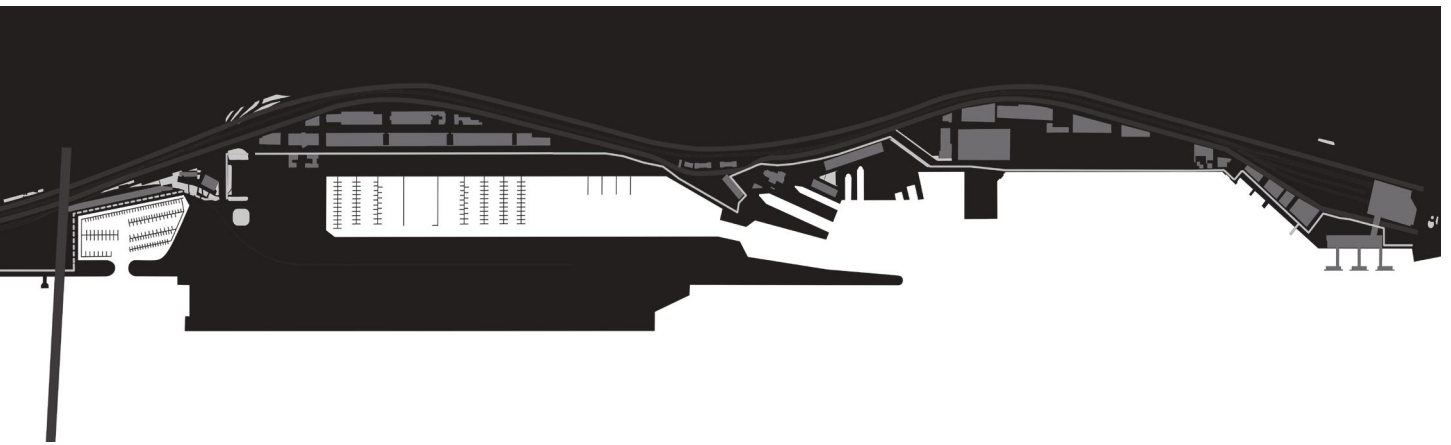
In my research I scrutinize harbor transformation projects from this perspective. I explore how designers make these derelict industrial landscapes accessible and attractive by creating connections and by inviting appropriation of the sites. The project in Nantes, for example, proposes a clever way of integrating bottom-up initiatives into top-down planning, thus overcoming standard practices. This project could become a model for urban transformation that builds on appropriation processes. Connectivity also plays an important role, because the main driver of the project is the opening up of formerly closed-off industrial plots into part of an evolving street network.

SITE-SPECIFIC TRANSLATION

The analytical framework described above allows design researchers to identify a harbor design project as site-specific if they find close links between the designers' apprehension of the site as it exists, and the designers' transformation of this site. In my research I furthermore propose to understand the nuances of such site-specific approaches through the concept of translation, which arises from the exploration of site specificity in art theory (Diedrich 2013, 64-89). Today, site specificity is a common, perhaps overused, argument in the design disciplines, legitimating those design operations that designers claim enhance a site's specific qualities. The term's lack of a proper definition or substantial theoretical foundation does not prevent the concept from being widely accepted as a normative instance of positive value in art, architecture, urban design and planning, and urban theory. This usage is young, though, and outside the arts, its rise is unexplored. The American art historian Miwon Kwon (2002) defines site specificity as a relational cultural practice oscillating between distant poles—seemingly

opposite ideas thought about together: "the nostalgic desire for a retrieval of rooted, place-bound identities on the one hand, and the anti-nostalgic embrace of a nomadic fluidity of subjectivity, identity and spatiality on the other" (Kwon 2002, 8). In harbor transformation these two poles correspond to the opposed design attitudes of museification on the one hand and total makeover on the other.

French art theoretician Nicolas Bourriaud challenges the dualism of Kwon's understanding of site-specific art and introduces the idea of continuous translation to describe those art works that counteract tendencies of standardization rather time-specifically than site-specifically. Within the globalized world, Bourriaud suggests to "to realize, practically and theoretically, a global space of exchange" that would be "shared within the space of translation." He describes this space as a common world which is actually both one and many at the same time, a multitude of individual representations of the world among which people move, "practic[ing] translation and organiz[ing] the discussions that will give rise to a new common intelligibility." (Bourriaud 2009, 188) As an alternative to standardization, continuous translation promises to negotiate in a new way the local and the global [FIGURE 3–5].

Transferred to the analysis of harbor transformation projects, Bourriaud's understanding of site specificity invites the design researcher to take a closer look into the temporal aspects of site-specific design approaches and identify those which through negotiation across time and space, and with continuous enquiries, interventions and evaluations, evolve endlessly into a dialogue of many actors and agents. This evolution and the related design processes should be considered as much part of the design work as other various elements, persons, materials, events, memories, and

FIGURE 4+5 Global/P01: Harbor transformation on the Tagus riverbank (photos: Joao Delgado da Silveira Ramos)

atmospheres. The work cannot be described as a classical form anymore; it is a progressing form, a "journey-form" (Bourriaud 2009, 106). In terms of harbor translation, the Tagus Cycle Track in Lisbon is a striking example of a journey-form: this temporary installation of a bike path has opened up the abandoned harbor sites on the Tagus riverbanks for appropriation to the citizens of Lisbon who now perform many more activities on site than biking only, prefiguring options for continuous harbor transformation **[FIGURE 3–5].**

To grasp the nuances of design approaches in harbor transformation understood as journey-forms, or ongoing translations of sites, and to make them operative for design analysis, it is worth studying the craft patterns of translation as explained by Italian semiotician Umberto Eco. (Eco 2010/2003; Eco 2004/2003). Eco accounts for various modes of translation within or across semiotic systems, ranging from low to high interpretive freedom: from "key change," such as the transposition of a piece of music from minor to major, to "translation proper," for example the transfer of a text from one natural language into another, to "adaptation as new work," such as the recomposition of a poem as a choreography in dance. Translation proper in Eco's definition is just one mode of interpretation among a rich panorama of other translation possibilities. To him translation offers a wide creative space for artistic expression.

When applying the panorama of possibilities to harbor transformation, they enrich the understanding of design as transformation and capture its nuances. From my research of harbor transformation projects, I scrutinized in depth the most telling examples (Diedrich 2013, 97-285), described them with the terminology of translation, and ranked them according to their degree of interpretive freedom **[TABLE 2].** My research focuses on contemporary design projects for harbor sites. It also raises the curiosity to further investigate designs for other post-industrial sites, and even sites in general, in order to learn more about underlying understandings of design and to potentially widen the range of alternatives to modernistic principles. Such knowledge can help updating the educational programs in the design disciplines and revising tacit assumptions about design within the design professions and their clients.

semiotic systems	translation mode	grade of interpretive freedom
harbour districts, urban districts		
		low
REFORMULATING THE HARBOUR The Port's Visual Quality Programme, Rotterdam	intrasystemic interpretation	**KEY CHANGE**
PERFORMING THE HARBOUR Tagus Bike Track, Lisbon	between intra- and intersystemic interpretation	**PERFORMANCE**
TRANSLATING FROM INDUSTRIALISED TO DEINDUSTRIALISED HARBOUR CITY Ile de Nantes, Nantes	intersystemic interpretation with substance change	**TRANSLATION**
TRANSLATING BETWEEN RIVER AND HARBOUR LANDSCAPE The Right Bank, Bordeaux	intersystemic interpretation with substance change	**TRANSLATION AS ADAPTATION**
RECREATING THE HARBOUR IN THE CITY Bjørvika Open Spaces, Oslo	intersystemic interpretation with matter change	**ADAPTATION**
REINVENTING A RIVER PARK IN A VALLEY AND A COASTAL PROMENADE ALONG THE HARBOUR Euroméditerranée 2, Marseille	intersystemic interpretation with matter change	**ADAPTATION AS NEW WORK**

TABLE 2 Translation modes of the harbor projects scrutinized in the author's case study, displayed on a scale ranging from low to high interpretive freedom (source: Diedrich 2013)

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LX GARDENS—LISBON'S HISTORIC GARDENS AND PARKS: STUDY AND LANDSCAPE HERITAGE

ANA LUISA SOARES
University of Lisbon, CEABN,
Institute of Agronomy, Portugal
alsoares@isa.ulisboa.pt

Ana Luisa Soares graduated with a degree in landscape architecture from the Instituto Superior de Agronomia (ISA) in 1995 and earned her Doctoral Degree in Landscape Architecture also from ISA
in 2007. She began her academic career at ISA in 1998 and currently is responsible for the Vegetation Applied to Landscape Architecture Planning and Computer Assisted Design subjects on the undergraduate degree in landscape architecture and the Vegetation in Urban Spaces on the Master's degree program in landscape architecture. Since 2009, she has also contributed to the third cycle of landscape architecture and urban ecology studies. She has been a researcher at the Centro de Ecologia Aplicada Professor Baeta Neves since 1998. She is vice-president of the ISA Management Board since December 2009.

SÓNIA TALHÉ AZAMBUJA
University of Lisbon, CEABN,
Institute of Agronomy, Portugal

ISABEL SILVA
University of Lisbon, CEABN, Institute of Agronomy, Portugal

ELSA ISIDRO
University of Lisbon, CEABN, Institute of Agronomy, Portugal

PEDRO ARSÉNIO
University of Lisbon, CBAA/CEABN, Institute of Agronomy, Portugal

Lisbon Landscape heritage / public gardens / assessment /
cultural landscape / historical value / trees

The project "LX GARDENS—Lisbon's Historic Gardens and Parks: Study and Landscape Heritage Inventory" (financed by FCT: PTDC/EAT-EAT/110826/2009) aims to undertake an historical, artistic, and botanical study of the development of Lisbon's gardens, "quintas" and parks from the eighteenth century up to the nineteen-sixties. Today it is recognized that within the dense urban fabric, green spaces are central to a city's structure and make important contributions in ecological, economic, social, and aesthetic terms. However, although gardens play a key role in Portuguese culture, Lisbon's gardens and parks have never been the subject of an in-depth study that leads to their protection through legal mechanisms. A more in-depth study is required to ensure their protection, enhancement and their dissemination as cultural heritage with high ecological, recreational, artistic, aesthetic, social, and tourist value.

Out of the sixty Lisbon gardens and parks, only twenty-seven of them have legal protection, twenty-three due to its proximity to an historic building. The majority of Lisbon's historical gardens of reference, such as Jardim da Estrela, Jardim Príncipe Real and Jardim de S. Pedro de Alcântara, are only

partially classified in protected areas, or associated to historic buildings (architectural monuments). Therefore, one of the goals of this project is to contribute to the establishment of the appropriate legal and administrative measures for the identification, listing, and protection of historic gardens. Interest in historic gardens should be stimulated by every kind of activity capable of emphasizing their true value as part of the patrimony and making for improved knowledge and appreciation of them: promotion of scientific research; international exchange and circulation of information; publications, including works designed for the general public; the encouragement of public access under suitable control and use of the media to develop awareness of the need for due respect for nature and the historic heritage. The most outstanding of the historic gardens shall be proposed for inclusion in the World Heritage List (ICOMOS 1982). The interdisciplinary research team includes specialists from landscape architecture, architecture, history of art, ecology, and botany. We intend to examine the development of public and private gardens in Lisbon, from the creation of the first public garden Passeio Público (known called Avenida da Liberdade) commissioned by Sebastião José de Carvalho e Melo, Count of Oeiras—Marquis of Pombal—up to the Modernist period.

METHODS

In the context of this project, sixty gardens and parks that illustrate the quality of the Lisbon's landscape art were preselected to be studied, to make sixty Landscape Heritage Inventories. The Landscape Heritage Inventory Model is structured around the following themes: history, history of art, landscape architecture, architecture, urban ecology, botany, culture, tourism, and sociology, among others, which is subdivided into various parameters to be researched. The definition of this model will provide all data fields required to develop the said database, so as to concentrate and manage the information collected in the subsequent stages of the project. The study of Lisbon's landscape heritage will be based on comprehensive research of the following themes: history, art and culture, landscape architecture, architecture, and urban ecology. The classification of the gardens studied will be complemented in terms of landscape architecture by their biophysical

analysis, visual quality (view analysis, quality of plant composition, and relationship with surrounding landscape), and the quality of the built elements (water features, statues, decorative elements, paving stereotomy, and furniture). The historic research brings together a range of documentary, bibliographic, and iconographic sources that will give us a new way of looking at the trends in Lisbon's landscape art. At the architectural level, the relationship between the gardens and town planning and their position in the urban fabric will be examined. Here the architectural quality of the surrounding buildings will be studied as they may contribute to the gardens' heritage value.

The urban ecology research will focus on biodiversity, in particular the identification of the plants in the gardens studied, by means of fieldwork (using geographical information systems to locate important tree species) and by means of historic research into the gardens' horticulture. At the same time, other data will be collected on site through fieldwork and photographic and graphic records. The LX GARDENS Project will reveal, broaden and structure knowledge of Lisbon's heritage.

The historic and botanical information are being managed using a relational database that will be an important information tool to promote and protect this cultural landscape. The relational LX GARDENS Database will also enable us to create a data network and establish the relationships between the various parameters to be studied, such as the relationship between the gardens and the city's development; between the history of the gardens and the date certain plant species were introduced. The data collected and the relationships established through the database will lead to the interpretation of results such as the gardens' role in the urban ecology, the contribute of the gardens to the city's sustainability, and the gardens' statement as a work of art, among others.

RESULTS

Since one of the goals of the project is to contribute to the study of Portuguese Landscape Heritage, its final stage is the publication of the management tool developed—Lisbon Landscape Heritage Inventory. In addition to this major goal, we also intend to classify the sixty historic gardens and

parks, and so contribute to their protection, preservation, upgrading, and dissemination. The results will be made public by the publishing of the LX GARDENS project both as a book and on the web, in order to present Lisbon's landscape heritage to the public. The online availability of the Lisbon Landscape Heritage Inventory will make it possible to classify the most important gardens, and thus ensure their safekeeping and dissemination. This projects sets out to enhance Lisbon's gardens and parks standing as cultural heritage, bringing them new life by designing thematic tourist visits and environmental and artistic educational activities. The aim of this study is to examine further the historic and aesthetic benefits, which will allow sixty Lisbon gardens to be classified as part of the city's cultural heritage (contribute to its legal classification) and thus provide Lisbon with a "product" that has strong tourist potential, enhancing, disseminating, and promoting cultural tourism.

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NATURE AS DISSONANT HERITAGE

THOMAS JUEL CLEMMENSEN
Urban Landscape, Aarhus School of Architecture, Denmark
thomasjuel.clemmensen@aarch.dk

Thomas Juel Clemmensen (b. 1973) is educated as an architect, holds a PhD in architecture and is a member of the Danish Landscape Architects Association. He is an associate professor at the Aarhus School of Architecture, where he teaches and carries out research in the fields of urban planning and landscape architecture. His main research interest is how landscape architecture can inform and improve current transformation processes in cultural landscapes. Publications include articles in the *Journal of Landscape Architecture* and the *Nordic Journal of Architectural Research*. Alongside his academic career, Clemmensen works as an independent consultant.

INTRODUCTION

Many former sites of land reclamation, where rivers and wetlands have been cultivated for the purpose of modern agriculture, are now subject to projects of nature restoration. In this context nature is often referred to as "the nature" or simply "nature" as if it was something objective or self-evident. But who defines and decides what nature is and what kind of nature to restore? And is "nature restoration" not a contradiction of terms in our deeply cultivated landscapes? To examine these questions it makes sense to draw parallels between nature restoration and "heritage production" (Tunbridge and Ashworth 1996).

If one accepts that heritage is not the same as history, but a contemporary product shaped from history, it is clear that the same area or object could be part of different heritages, created by different groups of people for different reasons. Inheritance logically and potentially involves disinheritance —"our" heritage is not necessarily "their" heritage. As a consequence all heritage production can be associated with a degree of "dissonance" that involves a discordance or lack of agreement and consistency between elements used

FIGURE 1 Inauguration of the monument that was raised in honor of the local landowners who had played an important role in reclamation of the Skjern River Delta, 1977 (Skjern-Egvad Museum).

FIGURE 2 Local landowners demonstrating at a ceremony celebrating the implementation of the Skjern River Restoration Project. The posters read "prestige won over reason," "a victim of environmental terrorism," and "keep the river clean —follow see Auken to the train" (Svend Auken being the Danish Minister for the Environment at that time) (Bendt Christiansen, 1999).

by different groups in their heritage production (ibid.). Much the same could to said in relation to nature restoration: if one accepts that nature it not existing outside culture as something that can be restored to its original state, but a contemporary product created and managed with certain objectives in mind, nature restoration like heritage production are prone to same kind of dissonance—nature is not necessary their nature.

NATURE RESTORATION AS HERITAGE PRODUCTION

We all know what nature is, as long as we do not have to define it. Therefore, in a cultural context, it is more important to speak of nature "perceptions" rather than nature "concepts" or "definitions." Nature perceptions are not definitions of what nature is, they are primarily formulations of a relationship between man and nature. Concepts of nature are often constructed backwards from the basis of our relationship to nature; the relationship we have, believe to have, or want to have. As such, perceptions of nature are more expressions of the culture creating them than the nature being perceived. They indicate both an identity and a framework for action, both what we are and what we do in relation to nature (Larsen 1996). It is precisely this relationship with identity that makes it relevant to understand nature restoration in the same terms as heritage production. The question

of what kind of nature to restore is a question of cultural identity; what kind of relationship do we have, believe to have, or want to have with nature? Just like with heritage production, nature restoration is a tool which nations, societies, communities, and individuals use to express, facilitate, and construct a sense of identity, self and belonging.

The term "nature restoration" itself does not reveal this forward-looking aspect of identity construction, as it expresses the idea of bringing something back, of restoring nature by bringing a landscape back to a former state. This idea of creating nature through landscape reconstruction can be linked to a particular reading of natural history formulated by the biologist Eugene P. Odum in his classical book *Fundamentals of Ecology* (1953). Odum describes nature's own ideal history without human interference, a situation in which each ecosystem ends its evolution in a stable state that is self-sustaining and in equilibrium with its physical habitat. This idea of an ecological equilibrium has since been challenged by a new theory of ecological dynamics, undermining the popular idea that an area left to itself will evolve "back" to an original nature. If human impact on an area is ceased or reduced, nature does not return to an original state, but evolves into new nature. The clock cannot be turned back; we do not restore original nature but we create it anew, we actively transform our surroundings
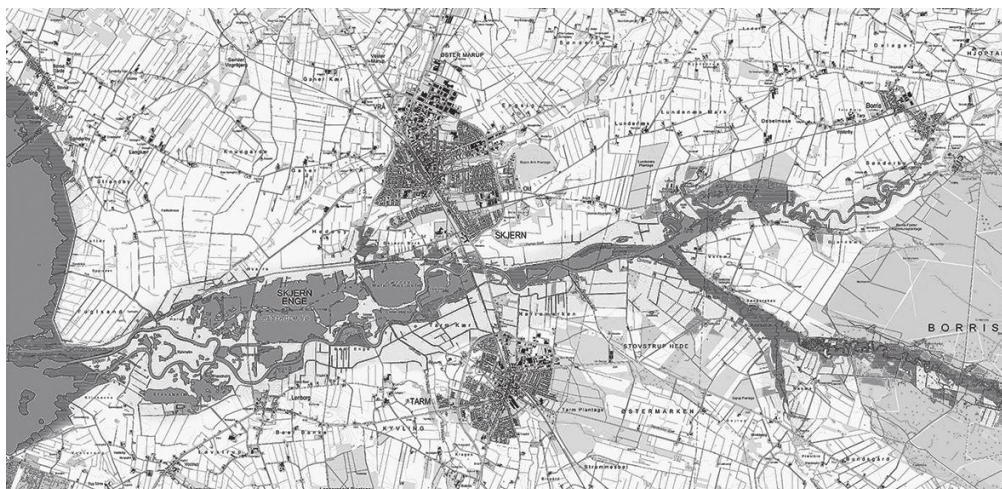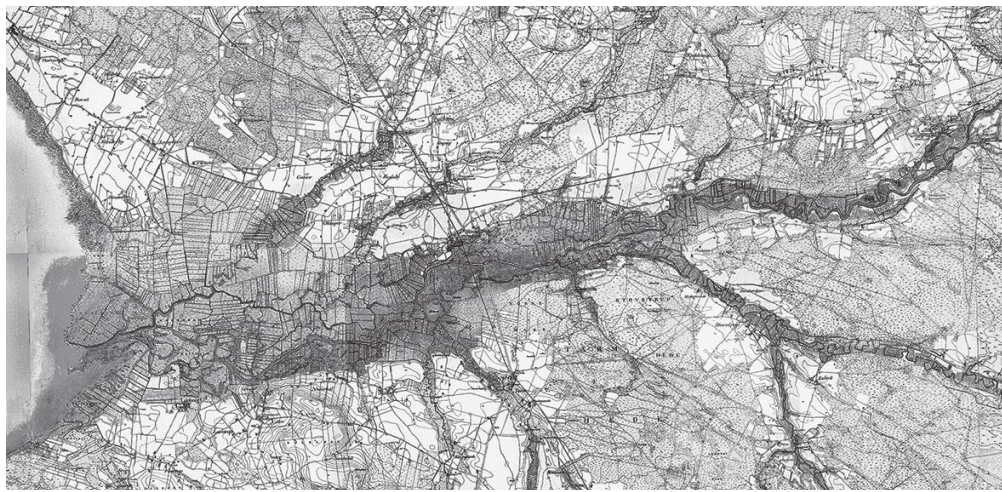
FIGURE 3 Three maps illustrating the radical transformations that the Skjern
River Delta has undergone. Starting from the top the maps describes the physical
character of the delta in respectively 1842-1899, 1977-1944, and 2012 (Danish
Geodata Agency).
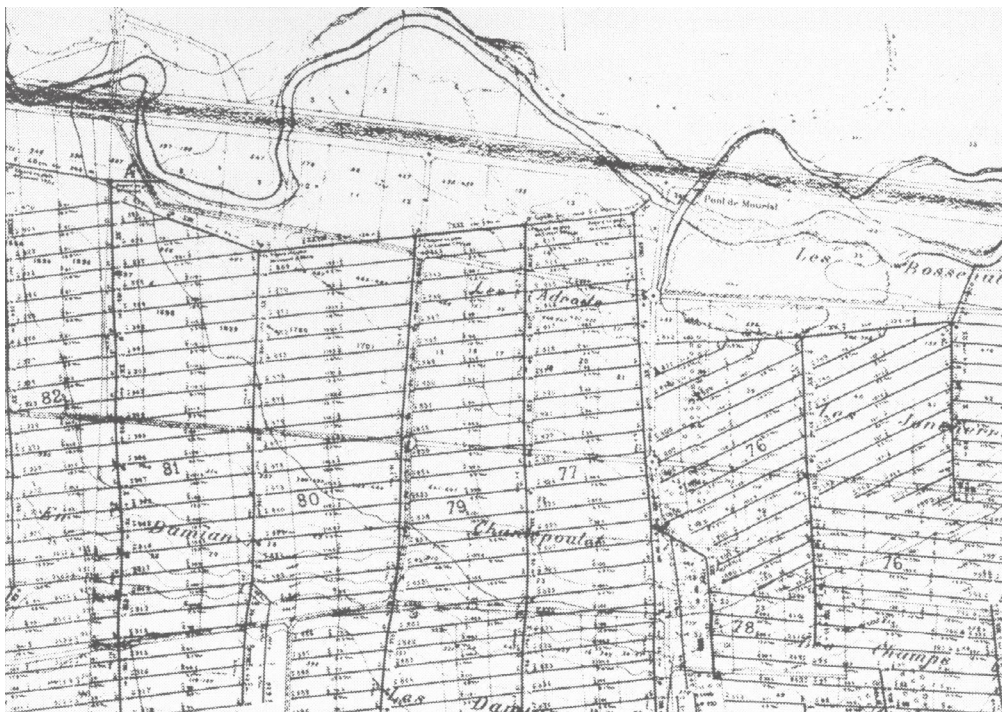
FIGURE 4 Detail map of The River Aire Watershed depicting the project for a canal superimposed on the existing river, nineteenth century (Municipal Archives, City of Geneva).

with certain objectives in mind (Näsman and Odgaard 2002). And most often it is with a certain landscape in mind— a process of landscape reconstruction in which some features and characteristics are deemed more authentic and valuable than others. As will be exemplified by the Skjern River Restoration Project, these kinds of landscape reconstructions can be the source of dissonance and direct conflict.

THE BATTLE OF THE SKJERN RIVER DELTA

The Skjern River in Denmark has always been known for its floods, and over the years many projects have been initiated to control its forces. This battle against the uncontrollable water finally ended in 1968 when the largest and most advanced drainage and land reclamation project in the history of Denmark was completed [**FIGURE 1 + 2**]. In 1987, only two decades after the extensive cultivation of the river delta was completed, the Danish Parliament made a principal decision to restore part of the river and its delta to "more natural" conditions. The major changes in the delta following its cultivation did not only prove to cause serious environmental problems, but the quality of the new arable land was in large parts also steadily declining because the earth was sinking and becoming more and more compact. It was these circumstances that finally led to the decision to restore the river and its self-cleaning process.

The parliamentary decision became the beginning of a new battle, which unexpectedly continued for twelve years. Despite the fact that the reclaimed land was sinking and that, to a large extent, it was sold to the state at a very reasonable price, local opposition to the restoration project continued, indicating that more than property rights and monetary issues were at stake. The cultural landscape of the Skjern River Delta constituted a central element in the local population's self-image and identity creation (Fritzbinning) of a new battle, which unexpectedly continued for twelve years. Despite the fact that the reclaimed land cultivation of the region's heath- and wetlands found it difficult to understand and accept the proposed "extensification" in land use. According to them, the cultivation of the river delta was a victory over the uncertainty that was associated with traditional meadow farming. Consequently some of them saw the restoration project as an insult against the legacy of their forefathers and Danish farming culture in general (Clausen 2007).

During the twelve years of battle between opponents and proponents, the main argument for going through with the restoration project and recreating the rivers meandering course changed from "restoring the self-cleaning process of the river" to "restoring the original nature of the river delta." This change in argumentation illustrates the symbolic
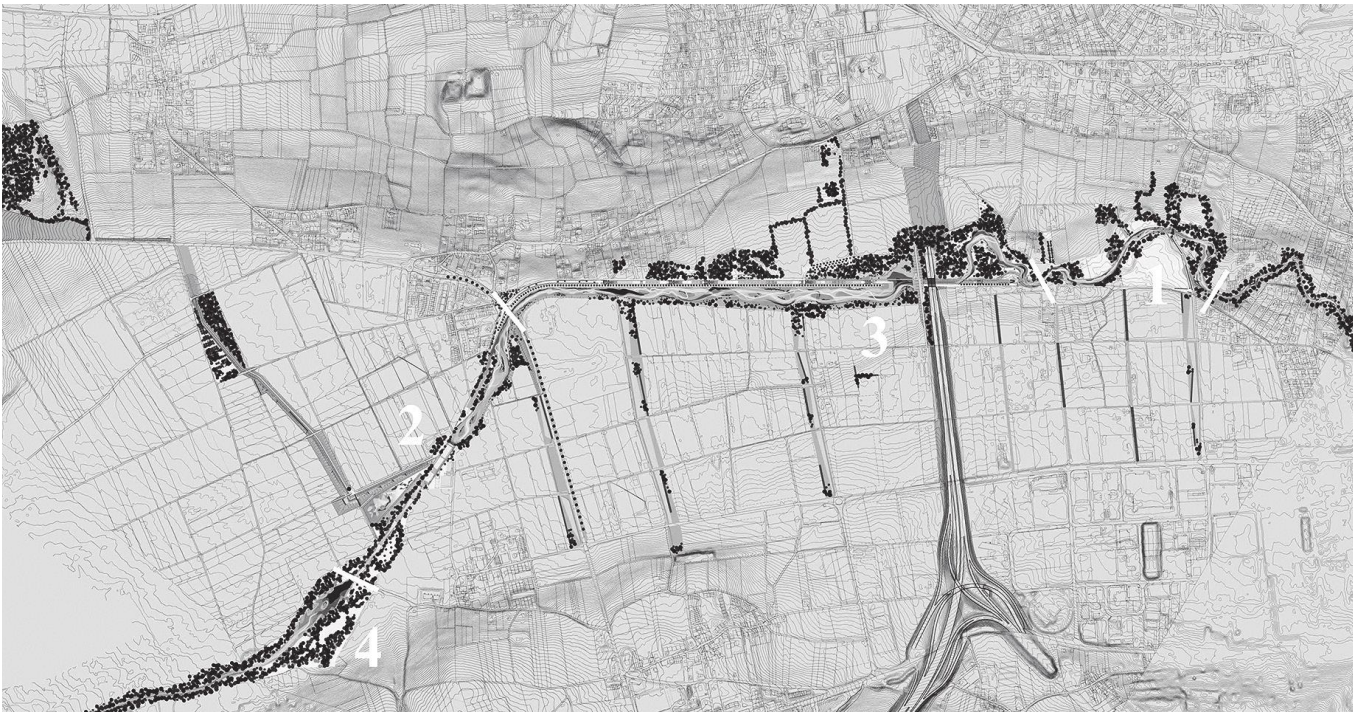
FIGURE 5 General plan of the proposed re-naturalization of River Aire indicating the project's four stages (authors addition): The first experimental stage between pont de Maris and pont de Centenaire (2002-2006), the second stage between pont de Certoux and pont de Lully (2008-2010), the current third stage between pont de Lully and pont des Marais (2012-2014), and the fourth stage from pont de Certoux towards the French border (2014-2015) (Superpositions 2012).

importance of the meandering river, a symbol associated with an original and sustainable nature. For the environmental authorities it became not so important whether the river became self-cleaning or was simply restored: the most important aspect was that the project was implemented because they wanted to be identified with a high-profile case of nature restoration (ibid.).

When the entire restoration project was finally completed in 2003 after four years of construction it was awarded the prestigious Europa Nostra Prize for "conserving the European cultural heritage" (Danish Nature Agency 2005). However, following Ashworth and his description of disinheritance and dissonance in relation to heritage production, it seems that the conservation of one cultural heritage in this case was at the expense of another cultural heritage. While the meanders of the Skjern River were reconstructed according to its assumed course in 1871, the embanked canal, which was the main feature and symbol of the cultivation project from the nineteen-sixties, was deconstructed and reduced to traces of the past. The local farming culture and its productive relationship to nature was suppressed and overruled by an urban culture with a more romantic and recreational relationship to nature, and the local landscape also became a national and even international landscape, challenging local identity [**FIGURE 2**].

THE GARDEN OF THE RIVER AIRE

Just like the River Skjern in Denmark, the River Aire in Switzerland—which courses through the southwest outskirts of Geneva—has gone through extensive regulation from the nineteenth century to the middle of the twentieth century and was reconfigured as a canal system to control flooding and improve agriculture in the river valley [**FIGURE 4**]. However, with increased volumes of water following climatic changes, and the continued urbanization of the watershed, the canal system proved to be insufficient as a means to control flooding in the area. As a result the authorities in 2001 decided to restore the river to its original form and requested ideas for realizing the "re-naturalization" through an invited competition.

The competition was won by the team called Superpositions, which was led by the Swiss architect Georges Descombes [**FIGURE 5**]. As the team name indicates, Descombes and his team proposed to superimpose a new river on the existing situation, rather than restore the old river. This strategy led to a very interesting transformation project, which in 2012 was awarded the prestigious *Prix Schulthess Des Jardins* (Schulthess Garden Prize) by the Swiss Heritage Society. The "garden" aspect of the award fits well with Descombes understanding of the project, which he refers to as a linear garden (Descombes 2012), drawing on John Dixon Hunt

FIGURE 6 View along the concrete reinforced canal of River Aire, 2013 (author).
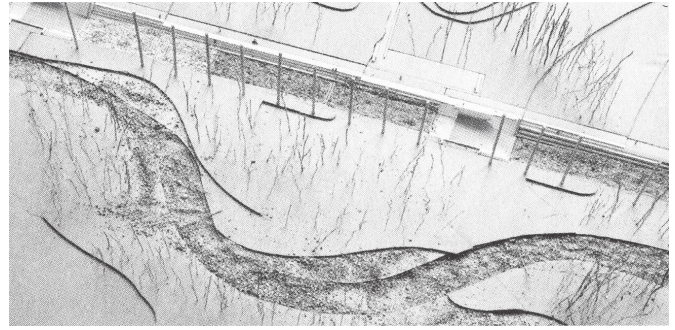
FIGURE 7 Study model illustrating the new river parallel to the existing canal that is proposed to contain a series of water gardens. Along the canal runs a promenade, 2007 (Superpositions).

and his idea of the garden as a third nature (Hunt 2000). According to Descombes, Hunt's garden theory not only involves a liberation of the formal aesthetic that often clings to the idea of the garden, it also identifies the garden as an important place of reflection, interrogation and doubt concerning the relationship between the world-given (first nature) and the world-transformed (second nature); a place that represents, simulates, and reveals what we are doing to the world-given (Descombes 2012). Following this idea, Descombes and his team have been very conscious about revealing what has changed in the river valley, exposing how different views of the world-given are continuously reconfiguring the landscape. The existing canal should be preserved as a canal, not only because it could be regarded as an important part of the cultural heritage of the region, but also more importantly in order to reveal what has changed [**FIGURE 6**]. Instead of simply returning the river to its former course and maintaining the canal as a remnant of the past, Descombes and his team experimented with a model where the water on one side follows the original bank of the canal, and, on the other side, in certain places, is allowed to meander more freely in a zone parallel to the canal [**FIGURE 7**]. In this way, the canal represents an in-between condition, in some ways like a battle zone with areas for leisure, natural environment, and agriculture —a laboratory for new relationships between the river and the surrounding landscape (Descombes 2009). Superimposing the new river on the existing situation and working with parallel watercourses have created a complex environment in which different perceptions of nature are juxtaposed and allowed to collide [**FIGURE 8**]. The idea of cultivating nature and controlling its powerful forces is represented by the beautifully engineered canal, which is

maintained as an active element. The idea of protecting nature's biodiversity and ecosystems is represented by the new floodplain parallel to the canal, in which a new meandering riverbed in time will develop. To speed up the naturalization process the floodplain has been established with a lozenge pattern of small depressions, which will provide a foundation for the kind of complexity that characterize riverbeds found in this region. The idea of nature as something recreational is represented by a promenade and a series of architectural installations along the canal, which in a precise and subtle way celebrate different meetings with the water and expose different ideas and desires without passing judgment, creating a true site of reflection [**FIGURE 9**].

CONCLUSION

Seen in relation to the subject of dissonance in heritage production, whether it is perceived as cultural- or natural heritage, it is striking how differently dealing with multiple interpretations of a particular landscape can be approached. In the case of the Skjern River Restoration Project one interpretation has replaced another after a long and hard battle. The "winners" subsequently transformed and modified a huge part of the landscape according to their ideas, causing a great deal of frustration and alienation among the "losers": dissonance is managed by exclusion. In the case of the Re-naturalization of River Aire the battle between the different groups of interests has never been settled and that seems to be exactly how Descombes prefers it—to keep the discussion open rather than to pretend to come up with the right answers: dissonance is managed by inclusion. The Re-naturalization of River Aire stands as a good example of how landscape architecture might contribute to this field

FIGURE 8 Juxtaposition of the parallel courses of the former canal and the new River Aire. Views from Pont Lully, 2013 (author).

FIGURE 9 On-site conversation between George Descombes and Danish landscape architect Stefan Darlan Boris. Transition point between the "cultivated" and the "wild" River Aire, 2013 (author).

of work, which otherwise tends to be dominated by professionals from the natural sciences. The work of Descombes and his team reveals approaches that could be labeled landscape architecture specific. Firstly, there exists an awareness and sensibility towards the palimpsestic qualities of a landscape (see Corboz 1993), which opens towards multiple interpretations of a given territory. This openness and legibility can be used directly in the proposed transformations as a way to manage dissonance in an inclusive rather the exclusive way. Secondly, drawing on John Dixon Hunt and his idea of the garden as a third nature emphasizes the importance of revealing what has changed in order for people to maintain a meaningful relationship to their environment. Again, this idea of leaving something behind in order to expose, and remember, what has changed provokes reflection and also provides an opportunity for multiple interpretations. Transferring this into the actual landscape design can add an aesthetic dimension to the understanding of landscape transformation—a deeper understanding rooted in the sensuous apparatus. Thirdly, the openness towards continuous change that characterizes the work of Descombes and his team along the River Aire seems firmly rooted in the practice of landscape architecture—where landscape is not seen as a *fait accompli,* but as a result of countless forces and initiatives (Geuze 1994). Bringing some of this openness towards changes in the field of nature restoration could prove to be extremely valuable when we are increasingly often, and on an increasing scale, asked to manage nature in highly cultivated environments.

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INTERNATIONAL, LOCAL AND INDIVIDUAL—MODERN MOVEMENT AND LANDSCAPE ARCHITECTURE OF SPAS IN SLOVAKIA

KATARINA KRISTIANOVA
Institute of Garden and Landscape Architecture, Faculty of Architecture, Slovak University of Technology in Bratislava, Slovak Republic
kristianova@fa.stuba.sk

Katarina Kristianova holds a Masters Degree in Architecture and Urban Planning from Slovak University of Technology in Bratislava, Faculty of Architecture, a Masters Degree in Urban Management from Erasmus University Rotterdam, Institute for Housing and Urban Development Studies, and PhD in Landscaping from Slovak University of Technology in Bratislava, Faculty of Civil Enginee-ring. Since 2003 she has worked in an architectural studio together with Juraj Illes, and since 2009 she is senior lecturer at Faculty of Architecture, Slovak University of Technology in Bratislava. Her research focuses on management of urban green space, cultural landscape, and history of landscape architecture.

modernism / spa parks / modernist landscape / Czechoslovakian architecture

INTRODUCTION

Unique interwar, modern spa, and sanatoria complexes in Slovakia, for example in Trenčianske Teplice, Sliač, and High Tatras were designed as *"Gesamtkunstwerke,"* with pools, colonnades, spa parks, and green spaces. They are signifi-cant representatives of modern heritage, international, and yet local and individual, creating a part of the cultural land-scape identity of Slovak spa resorts.
They represent the best examples of specific revolutionary architectural concepts of the Modern Movement—the unique innovations of the relationship between building and its environment, the "best practice" of the period, whose legacy resounds in the design of today.

MOMO IN SLOVAKIA—CZECHOSLOVAK AND INTERNATIONAL CONTEXT

Modern Movement governs the interwar architectural scene of Czechoslovakia (1918–1939), as "the new style in the new republic" (Moravčíková, 2005: 140). Establish-ment of the Czechoslovak Republic after the dissolution of Austro-Hungarian Monarchy generates the needs to express the new statehood formation, reflected in increased build-

FIGURE 1 Curative institute for TBC and respiratory illnesses in Vyšné Hágy, František Libra, Jiří Kan (coll. Svatopluk Basař, Soběslav Sobek, 1934-38). Source: Karol Plicka, Slovensko, Vysoké Tatry

ing activities. Many new state administration buildings, cultural, school, sanatoria, and spa complexes are built and it seems that the new style fits to express the ideas of the new statehood, as opposed to the old styles of the previous Austro-Hungarian period (Dulla and Moravčíková 2002; Moravčíková 2005). As noted by Ladislav Foltyn, Bauhaus graduate in 1929-1930, architectural concepts gradually leave the ornamental embellishment of the styles prevailing in Austro-Hungarian period—Secession, Cubism, and Rondo-cubism, historicizing stylization slowly fades away and the new purist concepts of architecture are emerging, representing an overturn in architectural thinking and struggle for modern unornamented expression (Foltyn 1993). Vladimír Karfík, one of the contemporaries who worked for Le Corbusier in 1925, and during 1928-1929 for Frank Lloyd Wright, remembers his student times in Prague (Karfík 1993), when he becomes to realize: "the beginnings of some revolutionary overturn in architecture, that in the Soviet Union a new stream emerged, called constructivism and functionalism, that there is a fight against classicism and eclecticism, against flowery secession, and that ornament is proclaimed a crime. First time I heard the names Le Corbusier, Adolf Loos, M. Ginzburg, Konstantin Melnikov, brothers Vesnin, or Mies van der Rohe, and Frank Lloyd Wright."

Postulates of modern design in Czechoslovakia are formulated within the vivid international environment of movements, groups, and individuals. "Modernity," in art, vogue, furniture design, in architecture, infiltrates into all domains of life and becomes a way of life.

As remarked by Gustav Peichl (Peichl and Šlapeta 1987, 7), functionalism developed in Czechoslovakia at the same time as it did in the rest of Europe, but its form was "quite distinct, with its own theoretical, philosophical, social, and political base".

MOMO AND ITS LANDSCAPE ARCHITECTURAL CONTEXT
Modernism enters the field of garden and landscape architecture as a reflection of modern trends in art and architecture. Garden art and landscape architecture only gradually adopt the ideas developed within the areas of visual arts and architecture. According to Marc Treib (1993) "unlike architecture and painting, modern landscape design made no cataclysmic breach with the past." Fletcher Steele, one of the pioneers of modern garden design, writes about the entrance of modernism into the garden and landscape architecture in 1930 (Steele in Treib 1993):

"We gardeners have always been behind other artists in adopting new ideas. At heart we are a conservative lot, sure that the perfect garden does not depend on new and
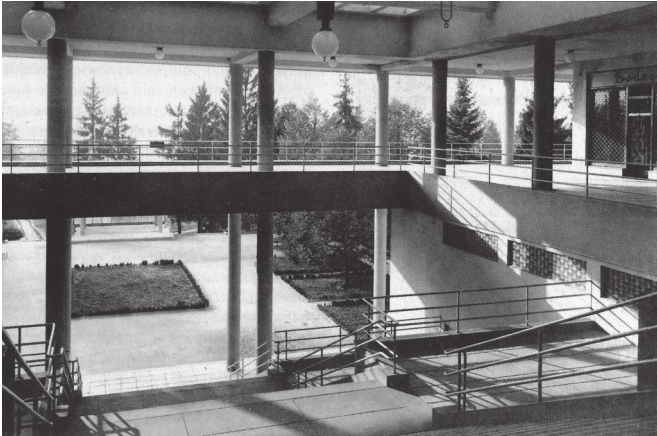
FIGURE 2 Central colonnade opening of the Sanatorium Palace in Sliač by Rudolf Stockar. Source: archive of author

FIGURE 3 View from central colonnade opening of the Sanatorium Palace in Sliač today. Photograph: Kristianova, 2012

strange things, but on the perfecting of what we already know. We do believe, however, in fitness. When the architect has built a new-fangled house filled with new-fangled furnishings, when all styles have changed and the youngsters complain, 'why don't you do something with the stupid old garden?' we wake up."

Ensembles of artistic expression instruments of the nineteenth century, rooted in traditions of Beaux Arts or Art Deco, are replaced by architectural and urban planning concepts, searching for solutions to satisfy the social needs of healthy living, needs for affordable housing, full of air, light, and greenery. These concepts, expressed in new pure, functional and unornamented form, influence garden design and landscape architecture.

Even "the modernist architects such as Le Corbusier regarded the landscape and plant materials almost as generic greenery, returning as a subject to be viewed or serving as a vegetal buffer between buildings" (Treib 1993), it was those concepts which brought changes in garden and landscape design. The characteristic features of modernist architecture—the unique solutions of relationship between building and its environment, between interior and exterior, between house and garden, are reflected in landscape architecture. Open plan means not only openness inside, but as well as outside, big glassed surfaces, strip panoramic windows, balconies,

loggias, marquises, or winter-gardens—all these elements create the characteristic features, which influence the design of outer spaces. New urban concepts of high-rise buildings, solving questions of dwelling needs, amidst vast green spaces, satisfying the needs for greenery, light and air, change the approaches towards landscape design of public space. These revolutionary ideas of the interwar modernism of the nineteen-twenties and nineteen-thirties continue to influence the ways of landscape architecture development in the postwar era, until today.

MOMO AND LANDSCAPE ARCHITECTURE OF SPAS IN SLOVAKIA

Concepts of interwar modernist landscape architecture in Slovakia manifest themselves in different scales and different typological forms, from gardens of family homes and villas, through solutions of outer spaces of school, bath or sport complexes, up to design of open urban spaces and urban concepts of new settlements, but specific and shining examples of modernist landscapes are found in the design of sanatoria and spa complexes.

Development of health insurance schemes and companies in the nineteen-twenties and nineteen-thirties, enable development of new sanatoria and spa complexes, which significantly transform the former landscape architectural settings of

traditional Austro-Hungarian spa resorts. Interwar modern sanatoria, in High Tatras, Sliač, or in Trenčianske Teplice, become an integral part of their cultural landscape identity, even in the cases, when they do not respect the surrounding historical or natural environment. It is for example the case of the oversized curative institute for TBC and respiratory illnesses in Vyšné Hágy, by František Libra, Jiří Kan (coll. Svatopluk Basař and Soběslav Sobek 1934-38) **[FIGURE 1].** Also curative house Machnáč in Trenčianske Teplice, by Jaromír Krejcar (1930-32), known because of its balconies resembling the Walter Gropius's balconies of Bauhaus, equipped with the customary rooftop terrace, was in the nineteen-thirties the highest building in Trenčianske Teplice, over rising the surrounding build-up area. Development of big building complexes often requires elaboration of new regulation plans for the entire spa resorts, as in the case of 240 meters long sanatorium Palace in Sliač, by Rudolf Stockar (I. 1927-31, II. 1931-37).

Modernism in sanatoria and spa complexes, on the one hand implementing global universal concepts in large scales, without respect towards surrounding environment, at the same time creates the new quality, with very specific individual and local characteristics, generated by the new principles of interrelation between building and its environment. This is the characteristic feature of many modernist spa

landscapes. For example, the central colonnade opening of the sanatorium Palace in Sliač, enabling the landscape to enter and go through the building, offering monumental distant views and elevated views towards the semi-opened courtyard, introduces the new kind of genius loci into the small scale, romantic, traditional, and historicizing landscape of the nineteenth-century spa resort and begins to form a new tradition **[FIGURE 2 + 3].**

Many cases prove that, while architectural concepts leave the decorative Austro-Hungarian monarchy styles and move towards pure, clear, and unornamented design, the horticultural concepts, garden architecture, and planting schemes still display the persisting nineteenth-century gardening styles. This is documented by many photographs where modernist architecture of buildings is complemented by historicizing plantation in secession or romantic manner, as it is for example in the case of the hotel Slovakia, modernist adaptation of the former hotel Hungaria, by Rudolf Sfockar (1930) **[FIGURE 4].**

Many examples of modernist spa and sanatoria complexes in Slovakia, document another characteristic trend, which is observed in the nineteen-twenties and nineteen-thirties in many countries—the shift from garden art towards landscape architecture, the change of focus from gardens to landscape, which continues in the further post-war landscape architec-

FIGURE 5 The swimming pool The Green Frog in Trenčianske Teplice. Bohuslav Fuchs, 1936-37. Source: archive of author

FIGURE 6 View from curved bathing boxes gallery, the swimming pool The Green Frog in Trenčianske Teplice today. Photograph: Kristianova 2012

ture development and in the further formation of its stylistic models from nature to abstract art and architecture (Hauxner 2002; Jorgensen 2010).

Spa resorts, designed as spa parks and green park cities, offer many possibilities to express the modernist approach towards landscape design, for example the small subtle circular music pavilion in Trenčianske Teplice, by Artur Szalatnai (1931), with slender columns bearing a thin circular slab, brings in extreme simplicity in the center of the spa grounds. Possibly the most outstanding example of the modernist spa landscape, the swimming pool Zelená Žaba, The Green Frog, in Trenčianske Teplice, work of Bohuslav Fuchs, built in 1936-37, represents the absolute symbiosis between the building and nature. The building leans toward the steep forest slope in a gentle curve and creates the flat green meadow with small round children's pool in the center, the elevated swimming pool is situated in the rock quarry. It was the most beloved work of the author **[FIGURE 5 + 6].**

LEGACY OF THE MODERNIST SLOVAK SPA LANDSCAPES AND ASPECTS OF THEIR PRESERVATION AND RESTORATION

"Specifics"—the unique values of the interwar modernist spa landscapes in Slovakia, expressed through relationship between building and its environment, represent the "best practice" of Modernism and inspire the current design. But aspects of landscape architectural values preservation and restoration are often forgotten and overlooked in the processes of Modern Movement architectural heritage conservation. Preservation and restoration needs of the Slovak modernist sanatoria and spa ensembles are often confronted with the needs of their new use and ownership, so the preservation of their values requires various management mechanisms and use of diverse protection instruments.

Aspects of landscape architectural values preservation of the modernist spa landscapes are very multiple and diverse, ranging from issues of built up structures conservation, to issues of preservation and restoration of living plant material, from issues of architectural detail conservation, to issues of preservation of general ideas and landscape values of the broad environment. These aspects need to be given focused attention in order to preserve the authenticity, the "international, local and individual specifics" of the modernist Slovak spa landscapes.

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THE FINE ART OF BEST PRACTICE

COMMENT BY GABI SCHILLIG, BERLIN/DÜSSELDORF

ON ARTISTIC RESEARCH

"*Es entsteht ein eigenes Bild, der Lage der Dinge. Bearbeitet wird, was noch nicht gewusst werden kann. Bearbeitet wird, was sich nicht anders herausfinden lässt. Künstlerisches Arbeiten erhöht Komplexität, macht Aspekte davon auf sehr spezifische Weise kenntlich, als Befragung von Wahrnehmungsfähigkeit.*"[1] (Christian Reder 2004).

GABI SCHILLIG

Prof. Gabi Schillig (*1977) studied architecture at the University of Applied Sciences Coburg and completed her postgraduate studies in conceptual design (Class of Prof. Ben van Berkel/Prof. Johan Bettum) at the Städelschule Frankfurt in 2004. In 2008 she founded her studio in Berlin. In 2012 she was appointed as professor for Räumlich-Plastische Gestaltung, Spatial Design at the Düsseldorf University of Applied Sciences at the Faculty of Design—Visual Communication, Applied Art, and Design/Exhibition Design. From 2007 to 2012 she taught at the Institute for Transmedia Design at the Berlin University of Arts—UdK Berlin. Since 2005 she has been teaching and lecturing internationally in interdisciplinary contexts. Gabi Schillig received several fellowships and prizes, amongst others: Akademie Schloss Solitude Stuttgart, Van Alen Institute, New York; Nordic Artists' Centre Dalsåsen, and KHOJ International Artists' Association, New Delhi. Her monographic catalog *Mediating Space: Soft Geometries, Textile Structures, Body Architecture* was published by merz & solitude in 2009.

Sometimes wonderful things happen in places where you least expect it. One of these moments for me was seeing, hearing, and experiencing James Benning's film *Nightfall* (2011), which was screened to commence the ECLAS Conference in St. Catherine's Church in Hamburg. The film consists of one, real-time, single camera take that records the transition from day to night in a forest. The green becomes rich and dark, light changes, and sound is transformed. The viewer is privy to the sensual experience of a landscape (time) space via the medium of film. The slowness and concentration that the film demanded from the viewer impressed me greatly. It could not have been a more impressive start to this symposium. I was very curious about traveling to Hamburg, to a conference addressed to experts in landscape architecture, where I, as a visual artist, was invited to speak—from a different perspective to a trained landscape architect. As a visual artist, I deal with landscape as a possible spatial context for my artistic investigative research. James Benning's film introduced me to a different encounter and confrontation with landscape than I would have expected at this conference.

I am concerned mainly with the question of how one can approach landscape on the artistic investigative level, particularly when it comes to researching, "developing," or "visualizing" the qualities, atmospheres, events, and processes of landscape that cannot be captured with "planning" methods. Especially when it comes to spatial experiences that are experienced on a multidimensional level, not just visually, but also as an olfactory, auditory, tactile, and gustatory experience; involving all the senses. One thing is clear: these multi-sensory (landscape) spaces lie outside of traditional planning. How can artistic inquiry as a topic of research, also within landscape architecture, lead to new dialogues and ultimately to innovative works? And above all: how best to transfer this knowledge and experience, as the basis for understanding, to the border zones of different disciplines?

The panel contributions for "The Fine Art of Best Practice": Rennie K. Tang

("Temporary Landscapes as Theater: Tools for Urban Research"), Gabi Schillig ("Propositions for the Landscape"), Petra Thorpert ("Space Turns into Place in Laborative Actions"), and Karen Foley ("Landscape Preference: Where Do I Stand on Exploration of Formalist and Objectivist Attitudes to Landscape?") all deal with the potential artistic and experimental strategies in and with landscape. These artistic creative procedures can subsequently yield a number of related procedures and common characteristics of artistic research.

Experiment All work presented by "The Fine Art of Best Practice" share two things: the venture of the experiment and the permeability of the boundary between disciplines. Artistic research is an open field, in which it is possible to work perhaps specific to a particular question, yet without a prescribed result. It is more process-oriented rather than set to a particular format or final end product. This experimental "research" however always involves a risk of failure in itself. Moreover, there is often a great potential of "new discovery" and, hence, truly innovative possibilities that arise precisely from this very unexpected condition.

Ephemeral Events (instead of Built + Planned) The format of the results do not have to be a finished "design" of landscape; they can be temporary interventions, actions, or installations that touch upon an analysis of landscape, where people are directly involved in design processes. This means less planning processes at the beginning, drawn to the last detail then developed and completed, but rather more experimentally developed projects that are ephemeral and transitory. Less technological and knowledge-based, but rather based on experience. The temporal and continuous variability are in a sense inscribed in the artistic process and the ensuing result.

Interdisciplinary Dialogues The attitudes of the above projects and (artistic) positions stimulate an ongoing productivity and the exchange between various disciplines, they also understand the potential for change involved. Ursula Bertram also argues in her text "Künstlerisches Denken und Handeln"[2] for the recognition of potential that unfolds precisely from the methodological difference between science and art; this heterogeneous perspective on things can lead to developing an active and dialogic negotiation of options, which in turn lead to unexpected experiences and insights.

In relation to artistic research, this also means thinking in terms of processes and less in terms of a specific objective or end product:

"... praktisch mittendrin sein, probieren, agieren, nachdenken, wegdenken, umsetzen, experimentieren, verwerfen und entdecken, mit Kameras, Performance, Pixeln, Farben, Worten, Aktionen, Konfrontationen, Kooperationen, Projekten."[3]

Open Processes The openness of artistic creative processes and the liberation from the completed, final product make way for many interesting deviations along the way. These possibilities and varied interim results open the perspective for other (artistic) ways of thinking. Creative processes function across the disciplines and areas of tension form between different creative and artistic fields. The visual arts enter into a dialogue with architecture, landscape architecture, design,

and the humanities and natural sciences. The focus shifts now to the developed concepts and no longer on the applied "tools." Artistic and design-related investigative approaches draw from precisely this heterogeneity of disciplines, the methodological and the resulting conceptual difference and diversity.

Benning's *Nightfall* and the panel contributions "The Fine Art of Best Practice" demonstrated this very impressively: artistic strategies and experimental ways of thinking change our perception of landscape, and hence our perception of ourselves. The capacity for perception, which is challenged by such artistic investigative positions, is the key capacity for the development of artistic, scientific, and conceptual design and creative processes. One thing that all this work shares is a poetic exploration of landscape, the involvement of people, and participants and/or observers in thinking and production processes. The goal is not necessarily the provision of knowledge or truth, but rather the procedural and action-oriented—an opening of spatial experience and the appreciation of diverse realities that exist in, parallel or simultaneous to, and coexistent with our world.

1 "An explicit image is created of the state of affairs. The still unknown is processed, as well as that which cannot be ascertained by other means. Artistic work increases the level of complexity, revealing in very specific ways its inherent aspects to be a survey of perception."

2 "Artistic Thinking and Acting"

3 "… to be right in the middle in practical terms: experimenting, acting, thinking, negating, implementing, discarding, and discovering by means of cameras, performance, pixels, colors, words, actions, confrontations, collaborations, projects."

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LANDSCAPE PREFERENCE: WHERE DO I STAND? AN EXPLORATION OF FORMALIST AND OBJECTIVIST ATTITUDES TO LANDSCAPE

KAREN FOLEY
University College Dublin, School of Architecture, Landscape Architecture, Ireland; karen.foley@ucd.ie

Dr. Karen Foley is Head of Landscape Architecture in the School of Architecture at University College Dublin (UCD). She was EFLA Vice President for Education 2004-2007 and teaches design studio on the undergraduate landscape architecture program at UCD. Her research interests include landscape assessment, rural landscape change, and more recently, urban resilience. She is one of the instigators of a EU funded research project bringing together urban communities and businesses together with local authorities and researchers to collaborate on practical new solutions for more sustainable and resilient European cities. Other ongoing funded research projects include an exploration of integrating ecosystem approaches, green infrastructure, and spatial planning.

landscape aesthetics / landscape preference

Landscape is a socially constructed concept. Its 2002 definition, as expressed within the European Landscape Convention, as "an area perceived by people" (COE 2002) explicitly contains the notion that landscape is primarily a mental construct. At its core the term "landscape" embraces the relationship between humans and their physical surroundings.

There is a challenge for policy-makers in accommodating the multiple meanings encapsulated in the term landscape, meaning, the dichotomy of something tangible, but also carried in the mind. It was the enactment of the National Environmental Policy Act of 1969 in the United States, with its implicit assumption that the aesthetic value of the natural environment was an important resource, which led researchers and designers to attempt to identify principles that could explain both the commonalities and differences in human response to their surroundings. Subsequent research involved the merging of two areas of inquiry; empirical aesthetics and environmental psychology (Nasar 1988). Much aesthetic theory has its roots in philosophy. One challenge in the development of a theory of landscape aesthetics is that the landscape, as an aesthetic object, has received little

specific attention from philosophers. Australian geographer Steven C. Bourassa (1991) believes that this has arisen due to the fact that many philosophers identify aesthetics with the philosophy of the arts, and that landscape is rarely regarded an art form.

Just as the understanding of landscape has an inherent duality, meaning, the combination of material and mental (Palang and Fry 2003), so too has the concept of landscape preference. The reviewed literature reveals that the study of aesthetic quality has two components: formal and symbolic/associational. Formal analysis of aesthetics focuses on the attributes of the object as they contribute to aesthetic response. Symbolic analysis of aesthetics focus on factors that, through experience, produce cognitive meanings (Nasar 1988). Aesthetic theory shows that some philosophers, for example Aristotle and Bell, believe that it is a quality inherent in the object being regarded that creates the aesthetic response. Other philosophers, for example George Santayana, believe that the aesthetic judgement was a fusion of the response to the object and the object itself (Wilkinson 1992; Lothian 1999, 178) examines the twin paradigms of the objectivist and the subjectivist approach to landscape assessment, meaning, whether the qualities of a landscape is an intrinsic attribute of the physical landscape (objectivist) or whether landscape quality is a human construct "based on the interpretation of what is perceived through the memories, associations, imaginations and any symbolism it evokes" (subjectivist). Andrew Lothian contents that if landscape quality is an objective characteristic then it can be measured by surveys, but if it is subjective, surveys will become irrelevant and quality must instead be based on an assessment of the community's landscape preference. Planners have grappled with this issue. As far back as the nineteen-seventies, local authorities in the UK began to include assessments of landscape quality within their development plans. While the methodologies used recognized the subjective component of aesthetic judgement, they sought to formulate quantitative ways of analyzing landscape. This phase was short lived, and following a review in 1988 by the Countryside Commission (a statutory body with responsibility for the countryside at that time), this statistical approach was dropped. Subsequently a clear separation between objective and subjective assessment was introduced which sought to describe, analyse and classify landscapes as a first stage, with evaluation very much a separate and resultant procedure (Thompson 2000).

ANALYSIS OF FINDINGS OF A RESEARCH PROJECT ON LANDSCAPE PREFERENCE

A research project examining attitudes towards the appearance of the Irish rural landscape during the height of the economic boom in the early 2000s revealed some nuanced responses towards landscape. It is postulated that this variation in response could be related to the specific components of aesthetic quality explored by the different research methods used; meaning, formal, and symbolic/associational.

This research was undertaken using multi-method research techniques. Digitally manipulated photographs were used as landscape surrogates in both qualitative and quantitative experiments. These images showed scenarios of differing types and extent of residential development in the rural landscape exploring the variables of housing number, position, size, and shape/form.

The first experiment was based around pair-wise comparison of images delivers in a PowerPoint presentation and run on an eight second timing. Images exploring the variables were constructed in Adobe Photoshop and saved as Jpegs. Using PowerPoint a series pairs of images were presented to the research participants, who recorded which one of each pair of images they preferred. One of the advantages of pair-wise studies is the possibility of using a large number of photographs and the simple and fast application of the preference experiment (Delucio and Múgica 1994). The short decision-making period (eight seconds) for deciding preference was significant. As this study concerns visual preference it was therefore considered important to get respondents' initial response to the images. Robert Zajonc (1980) argues that affective reactions, such as preference, occur without extensive perceptual and cognitive encoding. Excessive time for deliberation would allow respondents to analyse the images in terms of criteria other than their immediate visual response.

While the findings of the Photo-pair exercise showed which residential landscape types were preferred, in order to delve deeper and to establish *why* certain landscapes were

preferred a second experiment was based around a sequence of focus groups involving a series of change-scenarios exercises. These involved the focus group respondents working in small groups on A2 sized-photo images. Scenarios are common research tools as well as being used by a wide range of government agencies and policy makers to help participants imagine alternative courses of actions and outcomes (Shearer 2005). Such exercises, within focus groups, are useful stimulus to encourage more informal discussion among participants. Respondents were asked to indicate with a color sticker which image they liked and where participants get a chance to write comments on a spectrum of mediated landscapes. While the findings from both the pair-wise experiment and the focus group analysis indicated a similar pattern of landscape preference (a preference for a less urbanized landscape) there existed some nuanced differences arising from the two approaches. This is not regarded as a failure of the research experiment, but rather a demonstration of the dichotomy encapsulated in landscape, and the challenge that research in this area presents.

The differences centered on numbers of houses in the landscape and the position of those houses. The findings of the pair-wise experiment showed the strongest preference for an "empty landscape" (meaning, devoid of houses), while the lightly settled landscape was the preferred option emerging from the focus groups. Here it was evident from the transcripts of the discussion and the comments noted on the lightly settled landscape images that the research participants were considering other aspects than the purely formal characteristics of the image. Secondly, concerning the variable "position," clustered housing was the preferred option in the pair-wise study, while there was as stronger level of preference for the scattered/dispersed housing in the focus groups. One of the more debated aspects of Irish rural housing concerns the clustering of rural housing. Planning policy in Ireland favors clustered rural housing, but public sentiment strongly favors dispersed "one-off" rural housing. Again the focus group transcripts record research participants responding to the images, not just as aesthetic objects, but instead commenting on potential attributes that the images suggested to them. Qualities like open space, and association with nature were made.

CONCLUSION

Quantitative techniques such as those associated with Photo-Pair research measure immediate instinctive response and are designed to be primarily visual, meaning, not to encourage, or allow, time for detailed reflection. Attention is concentrated on the appearance of the landscape. This has been described in the literature as affective response (Zajonc 1980). In this case, in the pair-wise studies the participants can be considered to be outside the landscape, "looking in," and responding to formalist attributes of the landscape. In contrast with qualitative research methods, such as focus groups associated with visual change scenarios, time is allowed for participants to engage in individual introspection and explore memories and associations. It is suggested that such participants engage with this landscape simulation as if they were within it, and this produces a different response.

Lothian (1999) makes a strong case for the necessity of engaging with the community's opinions. The adoption of a multi-method research strategy does allow the exploration of the different aspects of the research questions. In the formulation of policy it is insufficient to know only which landscapes are preferred, it is important to know why these opinions are formed. Knowing the reasons underpinning these attitudes will help produce a more targeted response. The use of both qualitative and the quantitative research appear to indicate that each approach can reveal different things. The integrated methodology developed in this research project did reveal some interesting findings that might shed light on what is being measured by the two different ways of engaging with participants; namely, photo-pair research and focus groups with scenario exercises.

The title of this topic track is "who owns the landscape." The first answer is that no one owns the landscape because it is common good, a communal resource. However while no-one owns it, we each appropriate it in different ways based on where we position ourselves, James Corner (1999, 154) articulates the etymological roots of landscape as embracing both the old English term "landskip" denoting a picture of land and the German *Landschaft* as a "deep and intimate mode of relationship not only among buildings and fields but also among pattern of occupancy, activity and space."

It appears that our attitudes to landscape clearly incorporate both these aspects. This paper suggests that people's landscape preference can vary depending on how they position themselves; meaning, are they within the landscape, or, looking at it from the outside. While photographs may be less-than-perfect surrogates for landscape themselves, when it comes to landscape research their use in scenario style experiment settings can allow respondents to position themselves within the image and respond in ways that are more meaningful than the perceived formal "landscape as scenery response." The paper concludes by arguing the importance of using multimethod research techniques when trying to capture something as complex as landscape preference and notes how important it is that landscape planners and decision makers are aware of these differences when formulating policy.

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SPACE TURNS INTO PLACE IN LABORATIVE ACTIONS

PETRA THORPERT

Swedish University of Agricultural Sciences, Department of Landscape Architecture, Planning and Management, Sweden; petra.thorpert@slu.se

Petra Thorpert, born 1970, professionally practices as an artist and garden designer, and teaches garden design and landscape architecture at the Swedish University of Agricultural Sciences. She holds a Diploma in Fine Art and Garden Design (B.A.) and Landscape Planning (M.A.). As part of her artistic fine art searching process, and along with her interest in green environments, it is natural for her to link fine art with landscape and garden design. In landscape and garden design her interest in aesthetics and color aspects found new fields to explore. As a natural prolongation, she has over the past years started to explore the color and aesthetics effects of vegetation on humans through teaching and research: to combine fine art, garden design and research provide new inputs to her profession.

outdoor workshop / learning process / spatial qualities / young forest / color

INTRODUCTION

The main question of this project is how to find and develop a creative and instructive outdoor workshop approach and model, giving students a good understanding of spatiality, place identity, and site development in green spaces. A prerequisite has been that the workshop model should be simple to realize and without a need of expensive and bulky material. Sweden has been chosen as a base for the study of young and rather anonymous vegetation structures in the so-called Landscape Laboratory in Alnarp. This also gives a possibility to discuss with the students how to turn this kind of young often dense and sometimes uninteresting vegetation structures into more experience- and identity-rich conditions and stages with recreational qualities.

Discussions like this are very important and relevant because many urban areas in Sweden there are young, nature inspired vegetation structures in the shape of groves and forest stands, dominates in the green outdoor environment. These green spaces often have a weak identity and appear most often as a structureless mass while it has been shown that a variation in visual and spatial qualities of different vegetation structures are essential for our well-being (Grahn

FIGURE 1 Hornbeam stand in the southern part of project area

FIGURE 2 Birch stand in the northern part of the project area

et al. 2010; Stigsdotter et al. 2011). Researchers also stress the importance of visual availability together with half hidden rooms in the vegetation announcing mystique qualities around the corner (Herzog and Bryce 2007; Gustavsson 2004). However, it has been found that dense vegetation might even have a negative effect on humans (Jorgensen 2004; Jansson et al. 2012). In recent years this kind of vegetation structure has been associated with insecurity and attempts have been made to reduce their insecure influence by management actions (Jorgensen 2004). It is therefore important to pass the dense, and sometimes insecure, phase young plantations are undergoing as quickly as possible or mitigate it by trying to raise the rate of place identity by signs of conscious maintenance actions or by adding interesting or beautiful element as eye catchers (Shaffer and Anderson 1985; Jorgensen et al. 2007).

Researchers connected to the Landscape Laboratory at SLU, Alnarp, have focused on methods shortening the unstructured and quality poor juvenile phase of urban woodlands. This is tried through a conscious choice of plants, introduction of herbaceous stand carpets, and targeted management means which aims to clarify the different vegetation structure levels as well as stress individual elemental qualities (Gustavsson 2000; Nielsen and Jensen 2007; Andersen and Nielsen 2010; Boris 2010). Other research projects have focused on finding clearance concepts increasing the visibility depth in vegetation borders along walking and biking paths (Gunnarsson et al. 2012).

The physical results of the workshops in this study are in line with the findings of Roland Gustavsson (2004), and Thomas R. Herzog and Anna G. Bryce (2007) as well as Anna Jorgensen et al (2007) as the actions have had as a goal to raise the feeling of place identity by adding artifacts that emphasize spatiality and contribute with signs of human presence and care. Thereby they have probably also contributed to the feeling of security.

An important component in place and art making is to load the space with sense and meaning (Casey 1996; Tuan 1974). For the students, the workshop actions have certainly changed their experience of the area from anonymous green space to place loaded with meaning. The question is if other users have the same kind of experience?

It is also important to constantly question the design process to make it activating and communicative. If the questioning fails, a non-communicative design occurs which only becomes technology (Collingwood 1958). Thus, there is a danger in seeing a design process based solely on the question of how an environment can be improved. The creation is then included in a predetermined and non-applicant process and results in a technical design. In a design and place-making process, it is therefore essential that the question *why* is always central. This is something we have tried to keep in mind together with the students during the workshops.

MATERIALS AND METHODS

The project is implemented in the Landscape Laboratory which is a full-scale experimental site comprising forest stands, forest edges, watercourses, and meadows sited at the Swedish University of Agricultural Sciences in Alnarp (Gustavsson 2010).

The Landscape laboratory covers an area of twenty hectares and is dominated by a great number of multifaceted forest stands that have not yet reached a strong and adult character. Altogether there are sixty-five different forest stands which together with the meadows are crossed by three
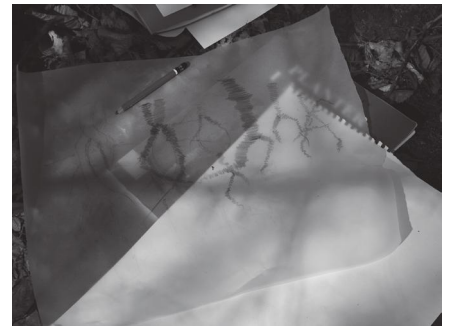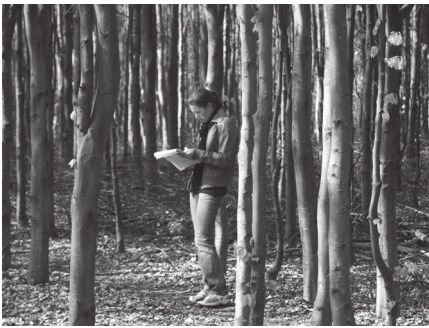
FIGURE 3–5 The students are looking for the site-specific character. The exploration is done both individually and in groups through discussions.

kilometers of demonstration tracks through green rooms of various sizes, including open, semi-open, and closed rooms.

The experimental development of the Landscape laboratory, in addition to traditional vegetation research also have a complementary focus on architectural and structural aspects, an emphasize on interior room qualities and the contrast between open and closed. The part used in this project was established 1994 to 1996 and demonstrates examples of stands for multiple use including, forestry, biodiversity, and recreation.

The stands consist essentially of monocultures, two to three species mixtures, and species-rich mixtures with up to fifteen species. There is also a variation in vegetation stratification, from pillared halls to complex multilayered stands. The southern part of the project site is dominated by "dark" shade tolerant tree species such as *Carpinus betulus* (Hornbeam) and *Fagus sylvatica* (Common beech). This stands are meant to be a visual contrast to the northern part where the tree species such as *Betula pendula* (Birch) and *Prunus avium* (Wild cherry) are more light demanding and also transmit more light. Landscape Laboratory is an important meeting point for researchers, students, and professionals in the fields of forestry, ecology, and landscape design. The research in the laboratory is ranging from plant establishment studies to studies of color aspects (Richnau et al. 2012; Thorpert 2012). **[FIGURE 1 + 2]**

The project was designed as one-day workshops held each year in May between 2008 and 2013. The participators were garden design students from SLU, Alnarp and an international group of architect students from the University of Lund. The students were working in mixed groups of about five to seven students in each group.

The assignment was to bring a sense of meaning and identity to a chosen area of woodland stand structures. This was made by first getting to know the area and then by interpretation as a tool find out what was the fundamental character and atmosphere of the site as well as which elements/parts of the room were essential features and structures of the main character. Also, the students had to identify the center of the place, and in dialogue with surrounding vegetation construct a place, a main place with a define entrance. Throughout the day the following questions were put to the students by the supervising teachers as well as the written task description:

"How does your chosen area affect the appearance of the place? What will fall within the main place and what is outside? Where is the best place for the entrance and why? What happens to our experience when artifacts and color are introduced in this specific woodland site?"

To help with the design process the students made up ideas by drawing sketches and tested the ideas by using natural material found in the area such as trunks, branches, and piles of leaves. They also got artifacts such as strings, piece of textile, and artistic paints. The result of the groups was evaluated, discussed, and reflected during a joined walk in the afternoon to the sites. The process as well as the resulting design was documented through field notes and photos. In short and informal interviews the students were asked about what they had learned and gained during the workshop day.

FINDINGS

The Working Process Analysis of the observations as they were documented in the field notes resulted in a division of the working process in five main steps. These steps could be

FIGURE 6–8 The discussions turns into physical actions. The investigation of the room's proportions and the ideas continues to be tested. The discussion ends with definition of main objectives.

characterized through the following designations:
- Interpretation of the spatial qualities of the place
- Proposing of objectives for the manifestation of the place
- Testing of objectives by construction and reconstruction
- Final manifestation and construction of the place
- Discussion and reflection in relation to process and results

Interpretation of the Spatial Qualities of the Place
[FIGURE 3–5]

Proposing of Objectives for the Manifestation of the Place
[FIGURE 6–8]

Testing of Objectives by Construction and Reconstruction
[FIGURE 9–11]

Final Manifestation and Construction of the Place
[FIGURE 12–20]

Discussion and Reflection in Relation to Process and Results
[FIGURE 21–23]

Student Reflections Retrieved from the Presentation and Informal Interviews A lot of interesting reflections were made by the students and collected. Hardly anyone argued for an opinion that the day had not raised their understanding of a capability in place-making. Here follows a summary of some student comments:
- "Outdoor learning opened my creativity"
- "Laborative actions makes it easier to re-evaluate and modify"
- "The process in the group is an eye opener in itself"
- "I have gained a greater understanding of the estimating distances"
- "An important learning process was that the daylight plays an important role in place making"
- "Insight that with only limited resources, a place can be created"

CONCLUSION
The student's positive reactions, occurring both during the presentation and in the informal interviews, demonstrate the potential of using young forest landscapes as an experimental and educational arena. Exercises carried out as outdoor learning and laborative hands on actions seem to be a good course of action towards a deep and sustainable understanding of place identity development. This is a strong argument for continued implementation of this kind of workshops. Also, these actions contribute to a deeper understanding of how young, dense, and sometimes uninteresting vegetation structures could be developed and enhanced towards places with strengthened identity and experience values.
It means that workshops and installations of this kind might help to develop trivial, identity poor, and precarious places. Furthermore, actions of this kind could be a way to reduce the insecure influence on humans of young and dense vegetation. They might also increase the experience of the mystique qualities of the place (Herzog and Bryce 2007; Gustavsson 2004) and contribute to the variety of visual and spatial qualities that is essential for our well-being (Grahn et al. 2010; Stigsdotter et al. 2011).

FIGURE 9–11 The searching process continues by identification of place center and entrance. The qualities of the place are tested by adding both natural materials found in the area and fabrics. The constructions are discussed and reconstructed a few times by trial and error methodology.

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FIGURE 12–20 The photos show the final manifestation of place centers and entrances, turning anonymous green space into places with a lot of identity. A subtle adding of color has a very strong effect on the experience of place.

FIGURE 21–23 The students' learning process deepens through group discussions and reflections. The exercise results in eye opening findings which give the students a very good understanding of spatiality, place identity, and the striking affects of added color in place-making in green environments.

PROPOSITIONS FOR THE LANDSCAPE
RELATIONAL SPACE, OPEN SYSTEMS AND SPACES OF COMMUNICATION

GABI SCHILLIG

studiogabischillig, Berlin, Germany
info@gabischillig.de

Prof. Gabi Schillig (*1977) studied architecture at the University of Applied Sciences Coburg and completed her postgraduate studies in conceptual design (Class of Prof. Ben van Berkel/ Prof. Johan Bettum) at the Städelschule Frankfurt in 2004. In 2008 she founded her studio in Berlin. In 2012 she was appointed as professor for Räumlich-Plastische Gestaltung, Spatial Design at the Düsseldorf University of Applied Sciences at the Faculty of Design— Visual Communication, Applied Art, and Design/Exhibition Design. From 2007 to 2012 she taught at the Institute for Transmedia Design at the Berlin University of Arts—UdK Berlin. Since 2005 she has been teaching and lecturing internationally in interdisciplinary contexts. Gabi Schillig received several fellowships and prizes, amongst others: Akademie Schloss Solitude Stuttgart, Van Alen Institute, New York; Nordic Artists' Centre Dalsåsen, and KHOJ International Artists' Association, New Delhi. Her monographic catalog *Mediating Space: Soft Geometries, Textile Structures, Body Architecture* was published by merz & solitude in 2009.

form, geometry / multisensorial structures / material /
textiles / body / spaces of communication

Experienced space is lived space, characterized by a complex interplay of visual, auditive, tactile, and olfactory qualities. Although space is considered as a materialization of manifold forces it quite often results in a form, an object, something that is concrete and stable, defining borders rather than permeable zones. This approach, often deployed by a unilateral, reductive use of digital techniques for spatial production, leads to an (architectural) space, resulting in an extreme objectification and fetishization of form. Of course space needs to be much more than form or a lifeless object—it is not just effective or "functional," but needs to be affective, changeable, and open.

The question for conceptual instruments in order to achieve the proposed openness of space remains. How to develop models of thoughts and methods to enable tactile dimensions and realize spatial situations rather than closed spaces? How to draw, model, and develop a multi-dimensional spatiality (and therefore relationships on a variety of different levels) that are moving towards sensorial experiences and away from the hegemony of sight? Those conceptual tools should be able to generate potentials of space, allowing for new
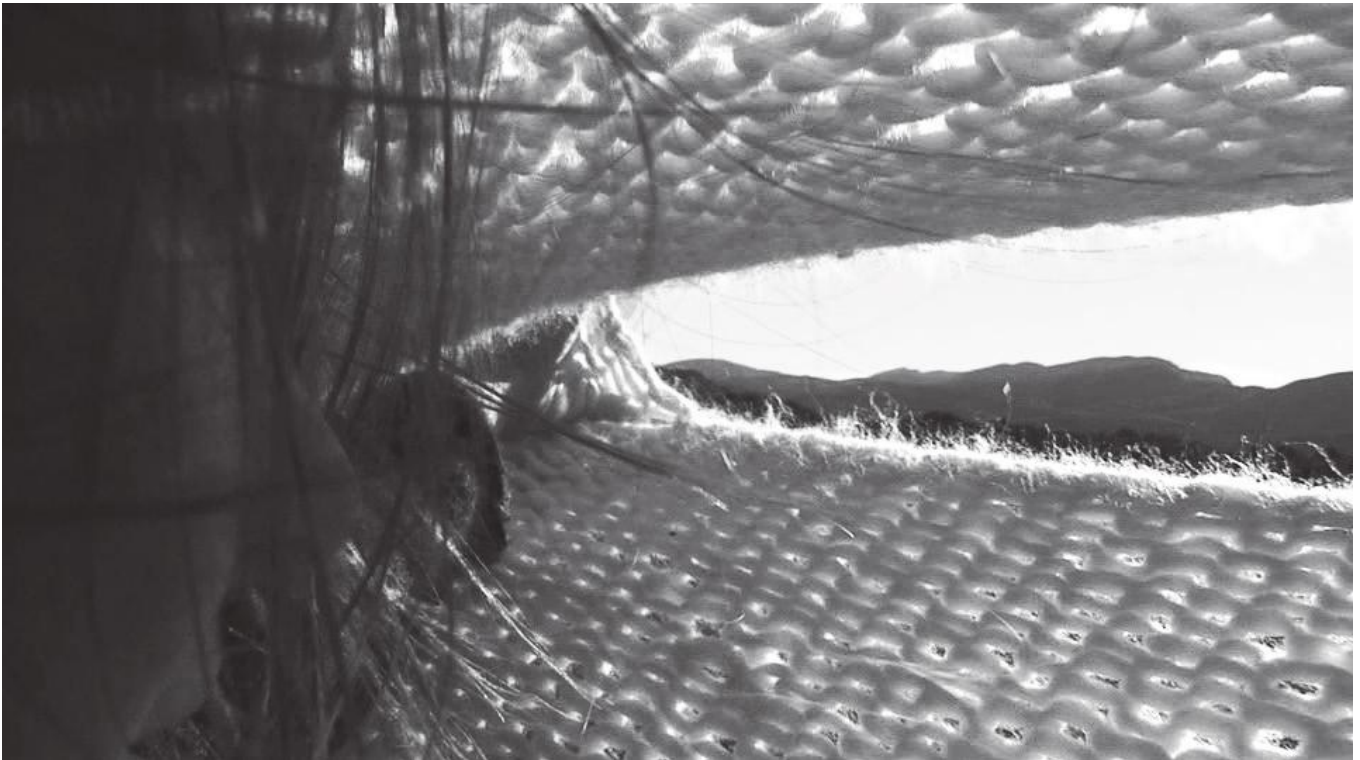
FIGURE 1 Gabi Schillig—Propositions for the Landscape (2010)

meanings and act as instruments of imagination. But what could be the "materials," models and strategies for creating intense, open, vivid spatial qualities, and interactive dimensions of space?

The Brazilian artists Lygia Clark and Hélio Oiticica enfolded a unique multidimensional understanding of spatiality already during the 60s through their works. At that time they opened up new grounds—specifically by rethinking the artistic object and relating contemporary spatial processes. Their conceptual works liberated artistic concepts from the hegemony of visual qualities and transformed materials, structures, and spaces into situations of communication.

At the ECLAS conference, SPECIFICS in Hamburg in autumn 2013 I reconnected both Clark's and Oiticica's artistic and theoretical approach, and their influence to my own work by focusing on two selected projects of the past years: *Propositions for the Landscape* (2010) and *Piksel—Bewegte Landschaft* (2012) are dealing specifically with the landscape as a field of intervention and its conversion into a space where interaction happens. Those two projects are associated with the notion of the *proposition* and of the *environment,* two relational and spatial concepts that were used by Clark and Oiticica to describe their work.

This contribution is to be understood as an imaginative dialog of thoughts, words, and images between both Oiticica's

and Clark's concepts and my own artistic work and research. Spatial terms and methods need to be extended.

ON PROPOSITIONS
(THOUGHTS ON LYGIA CLARK´S WORK)

"We are the proposers: we are a mould and it´s up to you to blow in the meaning of our existence.
We are the proposers: our proposition is the dialog.
We do not exist alone. We are at your mercy.
We are the proposers: we have buried the work of art as such and now ask you to let thought live through your action.
We are the proposers: we do not propose the past, the future, but the present, the here and now." (Lygia Clark 1968)

Lygia Clark (1920-1988) was a Brazilian painter, sculptor, conceptual artist, and researcher. In her works, spatiality is constituted through an intertwining of body, time and material. Some aspects were continually present throughout her work: the changeability of the object through the inclusion of the observer (who became an active participant), the temporariness of her work, an open-ended process of experimentation and the production of an immediacy of experience.

Clark's multi-faceted participatory work went through an inventive and evolutionary process within almost three

FIGURE 2–5 Gabi Schillig—Propositions for the Landscape (2010)

centuries, where she developed her work from abstract paintings to three-dimensional, geometrically transformable objects *(Bichos/Machine Animals)* by afterwards dissolving the artistic object into dialogical systems and relational bodily processes. The first transformable objects, *Bichos* (1960-64) were built from metalplates, interconnected and joined by hinges. Therefore the open form could be transformed by its user, unfolding to reveal unpredictable structures. Shortly before, in 1959, Ferreira Gullar, a poet and writer introduced on behalf of the neoconcrete group, to which Clark and Oiticica belonged, the term of the non-object (Gullar 1959), a work of art (like the Bicho) that facilitated a complex engagement of the senses. The *Non-Object* was supposed to generate an experience that unfolds in real time and real space through the active participation of the viewer. This shift from a stable, geometrical form to an unstable spatial condition is developed further in *Caminhando/Trailing,* being the turning point of Lygia Clark's work in 1964. The "work" consists of a simple paper strip that is twisted into a Möbius band and then is cut continuously along its "endless" geometry. The softness of the chosen material enables potential qualities of space, a new kind of relationship between contemplator and work. For that work Lygia Clark simply delivered the material and the proposal. After 1965 she referred to her work as *Propositions* (Clark 1968) that consist

of nothing else but by the use of others, according to certain procedures "proposed" by the artist. Those *propositions* were easily to be reproduced, composed of materials that were to be "found" (e.g. stones, plastic bags, etc.), not to be manifested in a singular stable material condition (form), but being rather open systems of material, spatial and bodily relations. The primary aim was not to give meaning by that what is seen, but rather by that what is experienced through sensory and tactile encounters.

FROM PROPOSITIONS TO ENVIRONMENTS (THOUGHTS ON HÉLIO OITICICA'S WORK)

The participant becomes the "structural nucleus" of the work, the existential unfolding of his incorporeal space. — Hélio Oiticica about his work "Parangolés," 1965 Hélio Oiticica (1937-1980), Lygia Clark´s close friend and also a member of the neoconcrete group, worked with ephemeral materials, creating multi-sensorial objects like the *Spatial Reliefs* that were wooden coloured geometrical structures hanging from the ceiling and which could only be fully perceived through the spectator's movement. Later he worked on the so-called trans-objects (e.g. *Bólides*) that could be experienced through different senses and which would only be activated by an exploration through the user. Between 1964 and 1968 Oiticica designed a series of textile

structures, the *Parangolés* (Oiticica 1965) for which in 1965 he invited people from the Favelas, to interact with during an exhibition opening at the Museu de Arte Moderna in Rio de Janeiro. The *Parangolés* communicated through the own experience of their users and emphasized the dynamics of life, in opposition to attempts to see reality as static and fixed. Through his work he succeeded in reflecting changes in art and society and articulated questions on issues of freedom in contemporary Brazilian society and culture.

Later in the nineteen-sxties, Oiticica expanded the spatial properties of the *Parangolés* into a larger scale, and created two spatial installations that he described as experiences: *Tropicália* and *Eden* referred to a spatial context through situating them within natural elements such as water, plants, sand and living animals. Oiticica invited people to walk bare-foot within those *environments* and to inhabit them—establishing new relationships between surroundings and body; these *environments* transformed increasingly into spaces of experience.

ON OPEN SYSTEMS AND SPACES OF COMMUNICATION

"… The work begins to suggest clues of another architecture. A responsive architecture, where her body-work and the conditions of its folds suggest a real, tectonic field." (Sir Peter Cook 2009 on Gabi Schillig's work)

PROPOSITIONS FOR THE LANDSCAPE (2010)— GABI SCHILLIG

Propositions for the Landscape created poetic, temporary gestures in the Norwegian landscape by implementing knit-ted devices or material interfaces that established subversive —and often irritating—relationships between the body and the landscape. It is exploring the reappropriation of the physical by using materiality as an instrument for negotiat-ing boundaries between bodies, the non-constructed (na-ture) and the constructed (textile interfaces). The proposed knitted structures between body and landscape became operative instruments for their users—devices to process bodily interaction with the environment. It is a knitted, elas-tic geometry that was used as an instrument of imagination where the physical towards the structural was of specific interest—landscape is apprehended in a different, personal way as the knitted devices become mediators between users and their surroundings. The work folds open and back upon a series of structures, provoking a constant re-organization of the object-subject-environment relation **[FIGURE 1–6]**.

PIKSEL—BEWEGTE LANDSCHAFT (2012)— GABI SCHILLIG

Piksel is part of the interdisciplinary project *Bewegte Land-schaft* (see also: notes on the project by Ingrid Burgbacher-

FIGURE 7–14 Gabi Schillig—Piksel—Bewegte Landschaft (2012)

Krupka 2012) that was developed and realized in Southern Germany working with forty inhabitants from the region. The "contemporary" landscape is often perceived or captured through digital images which are consisting of thousands of immaterial pixel elements. The intervention's aim was to transform the immaterial digital pixel back into physical materiality. The project was based on sharing one conceptual idea and certain design principles, like a common basic geometry (square) and material (linen). At the same time —the concept was open to the participants' own choices and narratives. The outside appearance of those textile structures was uniform, based on the geometry of a pixel/square, but from the inside textile layers were developed according to own personal narratives, colors of seasons, or layers of the landscape.

Within a few weeks all participants created their own pixels, which were made out of different linen types. Already within the conceptual and development process, situations of communication emerged that were unveiled through texts, materials and dialogs. In autumn all pixels were carried into the landscape and enfolded by the people—they were worn, carried, sat on, or used in other ways in the landscape. Natural or computer-generated sounds of the landscape became part of the unfolding process. The role of other visitors ("the audience") was open—people were involved in using, wearing, exploring the textile objects (pixels) that have been created by others [**FIGURE 7–14**].

Performative and participatory strategies for spatial production generate a changing, multi-dimensional understanding of landscape and space. All introduced works do not constitute fixed points in space, but, by dissolving formal-aesthetic geometries or object, aim to mobilize people into (inter) action, providing soft (not only in terms of material, but also of structure), and therefore, adaptive dialogical structures for getting in touch with bodies and spaces. The natural or cultivated landscape is not used as a stage and rather transformed into a space of communication that is temporally becoming a place for dialogues and personal encounters. Those concepts are questioning a static production, control, and state of space by investigating geometrical structures and textile materiality, mapping relations of and in space. All those approaches question the desire to redefine the territory by establishing "lifeless" objects. They rather offer an alternating action between place, subject, and spaces. Those propositions and environments enable an experimental dialog in terms of spatial perception, creating a co-existence of different realities and imaginative thoughts. Finally not the construction (or visibility) of form is of importance but an invention of a space and its relations that need to be discovered.

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TEMPORARY LANDSCAPE AS THEATRE: SMALL EVENTS, BIG FUTURES

RENNIE KAI-YUN TANG
*California State Polytechnic University,
Department of Landscape Architecture,
USA; rktang@csupomona.edu*

Rennie Kai-Yun Tang is a designer
and educator based in Los Angeles,
and Assistant Professor of Landscape
Architecture at California Polytechnic
State University, Pomona. She often
collaborates with artists on site-spe-
cific works that fuse concepts drawn
from her various fields of expertise,
including architecture, urban design,
and dance. Her research interests
include temporary landscapes,
movement-based analysis of public
spaces, and measuring social dimen-
sions of the built environment. She
is currently working in collaboration
with a choreographer on a commissi-
oned project for the Van Abbe Muse-
um in Eindhoven, the Netherlands, to
design a public tour for the museum.
She holds a Bachelor's degree in
architecture from McGill University
and a Master of Science in Architec-
ture and Urban Design from Columbia
University. For more information see
www.rennietang.com.

*temporary urbanism / urban theater / Los Angeles /
urban experiments / open streets*

SITUATING TEMPORARY LANDSCAPES

Much literature covers the broad arena known as temporary
urbanism along with various allied "urbanisms" such as
tactical, incremental, guerilla, pop-up, transient etc. (Hou
2010; Haydn 2006; Greco 2012). These movements grew out
of a climate of economic uncertainty in cities throughout
Europe and North America resulting in a lack of resources,
power and control to implement formal master plans (Bish-
op 2012, 3) that often take several years or even decades to
implement, if at all. Further reinforced by academic cri-
tiques declaring the death of the master plan (Cuff 2011, 19)
and the need for alternatives to planning (Haydn 2006, 19),
temporary urbanism has risen to the foreground to confront
these realities. In light of this, temporary projects are now
happening in primary civic spaces such as parks and streets
and thus could be aptly called temporary landscapes (Mayo
2009). CicLAvia is an open streets event in Los Angeles that
removes vehicles from streets to encourage active recreation.
In a city that is defined by its car culture, this event tempo-
rarily constructs urban life in a place not typically associated
with it. Like a living organism CicLAvia follows and reacts

FIGURE 1 Aerial View of CIcLAvia (Photo courtesy of CicLAvia)

to the more permanent environments it attaches itself to. In this analysis short-term effects of CicLAvia are correlated with long-term projects in the city to reveal critical relationships that may be of value to designers and planners [**FIGURE 1**].

METHODOLOGY

In order to explore the hypothesis that temporary landscapes can serve as tools for urban research, it is necessary that the researcher rely on the project—as designed—to self-produce its own data. Unlike researchers who design their own experiments (Felson 2005; Hirsh 2011; O'Doherty 2013; Halprin 1969), I will study an existing temporary landscape to demonstrate its viability as a research experiment. The characteristics of temporary landscapes that make this point evident are: controlled temporal and spatial conditions, action-based data and repetition. Each iteration of the event allows for a process of reflection, feedback, adjustment, and analysis, elements necessary for urban research.

Drawing from methods of urbanist William H. White, I approach the area of study as if entering into a theatrical scene, playing the dual role of spectator and participant (Whyte 1980). The findings presented in this paper emerge out of my role as "spectator," including an interview with one of CicLAvia's co-founders. During the next phase of this research I will be attending CicLAvia events as a participant-

researcher to observe "from the inside." The use of theatrical or role-playing strategies as urban probes requires researchers to become equals with other participants (Pink 2008; Saeter 2011) so they can experience the event from the perspective of their subjects. As an experiment "in the making" that is continually learning from itself, my task within this process is to collect and assemble the data to reveal potential avenues for continued exploration of this method.

RESULTS

TABLE 1 displays data for a number of long-term projects either recently completed or in-progress. Short-term reactions are reflected by the changes in CicLAvia routes and activity hub locations for each event. **FIGURE 2** graphically conveys the frequency of CicLAvias combined with a timeline of long- and short-term related events, while the mapping locates these events in relationship to all the routes combined. **FIGURE 3** depicts CicLAvia routes as evolving threads crawling across the city in response to current events.

These graphics demonstrate the strong interconnections between short-term (CicLAvia) and long-term projects in the city and how they fuel and respond to each other. The timeline indicates that CicLAvia's frequency is increasing. The mayor's comment that he would like CicLAvia to

Mapping of CicLAvia Routes and Reactions

CicLAvia Frequency and Timeline (Long-term | Short-term)
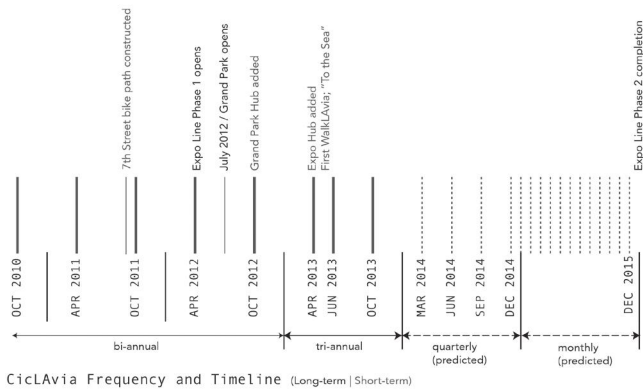
FIGURE 2 Frequency, timeline, and mapping of CicLAvia

FIGURE 3 CicLAvia routes and related events

become a monthly event (Paley, personal communication, August 2, 2013) led to the prediction that the frequency will rise further. Unexpected actions such as the construction of a new bike lane on 7th Street and routes that expose participants to the new light rail line and its destinations demonstrates the agency of CicLAvia in pushing the city toward its long-term planning goals. CicLAvia strategically taps into long awaited projects, making them tangible during lengthy construction periods.

CONCLUSION

Through the concept of opens streets, temporary landscapes have been shown in this study to closely follow permanent projects in the city either recently completed or under construction. They help to mitigate the negative attitudes and impatience that naturally arises as long-term planning processes unfold. Temporary landscapes are resilient forces that respond to unexpected turns, anticipate potential, generate excitement and provide a form of "cultural training" for citizens. Methodologies that utilize role-playing and constructed scenes, inspired by theatrical techniques, hold promise as a form of research that is based on live experience and designed tactics. Design and research come together as partners rather than existing on different planes of thought.

Temporary landscapes give rise to the design strategies of removal and remapping. The powerful act of removal is a means of creating possibility or invitation that can only be achieved in urban space for limited time periods. CicLAvia is a dynamic landscape of human mobility that continually remaps the city for its participants, a process that counteracts the top-down authority of the master plan.

This study uncovers the hidden layers behind temporary landscapes that give them value. It is important to note that such projects are valuable in their own right, not only as research, but also as events with their own social, political, environmental or cultural missions. CicLAvia is a recreational event that creates temporary open space in the city; it promotes the use of alternative transportation and celebrates Los Angeles's diverse neighborhoods. The ability of temporary landscapes to serve as research tools further augments their value. Evidence of long-term value is measured indirectly by the actions that result from the event, such as the unexpected construction of a bike path or self-generated activities along the route. The value of temporary landscapes is easily overlooked because of the marginal conditions within which they typically reside. It is now time for a shift in attitude that reflects contemporary landscape practice, where possibility, temporality, and resilience are viewed as positive forces while permanence and fixity fade into the background.

Long-Term Project	Description	Scale	Budget	Duration*	Short-term CicLAvia Reaction	Speculated Potential
LA City 2010 Bicycle Plan	Bikeway networks, policies and programs	1,684 mi (2710 km)	$235-427 million***	35 years (5 yr increments)	CicLAvia #2 followed by 7th Street Bike Path construction	More bike paths constructed and commutes by bike
Expo Line Phase 1	Light-rail from Downtown to Culver City	8.6 mi (13.8 km)	$930 million	6 years (2006-12)	CicLAvia #6 Expo Hub added; first WalkLAvia	More people using trains for east-west commutes
Expo Line Phase 2	Light-rail from Culver City to Santa Monica	6.6 mi (10.6 km)	$1.5 billion**	3 years (2012 - 015)	CicLAvia #6 Venice Blvd "To the Sea"	Increased frequency of trips from downtown to beach
Grand Park	Civic park in downtown LA	12 acres (48 652 m2)	$56 million	2 years(2010-12)	CicLAvia #5 Grand Park as major hub	Increased use of both park and metro
Future projects to be added to study						
Union Station Master Plan	Transit hub improvements/high speed rail					
Cap Park 101	Urban design solution to cap 101 freeway					
Notes						
* Duration refers to either the length of time for project construction or full build out of masterplan						
** includes design, construction, utility relocation, light rail vehicles and real estate						
*** excluding staffing costs						
Sources						
http://www.buildexpo.org/about-expo/						
http://en.wikipedia.org/wiki/Grand_Park						
http://planning.lacity.org/cwd/gnlpln/transelt/NewBikePlan/TOC_BicyclePlan.htm						
http://blogdowntown.com/2012/10/7029-ciclavia-not-just-for-cyclists-walkers-group						

TABLE 1 Long-term projects and short-term reactions

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LANDSCAPE AND STRUCTURES

Landscape and environmental planning are an intrinsic element of engineering sciences, and, in turn, a cultural landscape would not be possible without engineers. Technical innovations are often a counterpart of inventions in the field of landscape architecture. How we deal with infrastructure is an important issue when it comes to the specific characteristics of a region. Infrastructure is an integral part of cultural landscapes; it determines their look and feel and is responsible for providing the means of using and developing the area.

What forms of open space are now generated by hybrid infrastructure constructions? What landscape images do they create and how do they determine how landscape is perceived and understood?

How can the involvement of landscape planners help in the design of functional constructions?

What interdisciplinary knowledge and learning experiences are necessary to find satisfactory methods of dealing with these structures and their possible alteration in technical, environmental, and design terms?

MULTIDIMENSIONAL LANDSCAPES

ANALYZING STRUCTURE AND FUNCTIONS— CAN LANDSCAPE METRICS IMPROVE THE LANDSCAPE PLANNING PROCESS?

MATTHIAS PIETSCH
*Anhalt University of Applied Sciences,
Department of Agriculture,
Ecotrophology and Landscape
Development, Germany
m.pietsch@loel.hs-anhalt.de*

since 1997, has been teaching GIS-applications in environmental planning at Anhalt University, and working as a landscape architect for different firms as an environmental planner and GIS consultant. Since 2005, he has been back at Anhalt University as a senior research assistant and GIS project consultant for the affiliated Prof. Hellriegel Institute. His research topics include using GIS methods in environmental planning and design, as well as analyzing landscape functions on different scales. Pietsch is currently writing a doctoral thesis on using specific GIS methods to analyze biodiversity in landscape planning at the Technical University of Dresden. Since 2002, he has served as a member of the scientific committee and the review team of the International Conference on Information Technologies in Landscape Architecture, DLA.

KLAUS RICHTER
*Anhalt University of Applied Sciences,
Department of Agriculture,
Ecotrophology and Landscape
Development, Germany*

INTRODUCTION

Landscape planning supports sustainable development by creating planning prerequisites that will enable future generations to live in an ecological intact environment (BfN 2002). Existing geographic information systems (GIS) offer the needed capabilities concerning the whole planning cycle (Harms et al. 1993; von Haaren 2004). Data capturing for inventory purpose, scientific-based analysis, defining objectives, scenarios, and alternative futures and planning measures can be carried out by using GIS (Steinitz 2010). Transforming the existing planning process to a process-oriented one with new ways of interaction technical enhancements are necessary as well as a new planning and design style (Ervin 2012). Therefore, teaching methods must be changed to a more process- and workflow-oriented way of thinking (Steinitz 2010; Ervin 2012) using the advantages of the different software tools like GIS, CAD, visualization, and Building Information Modeling (BIM).

While landscape planning is based on analytical processes, objectives and measures are drawn from scientifically landscape analysis and normative democratically legitimized
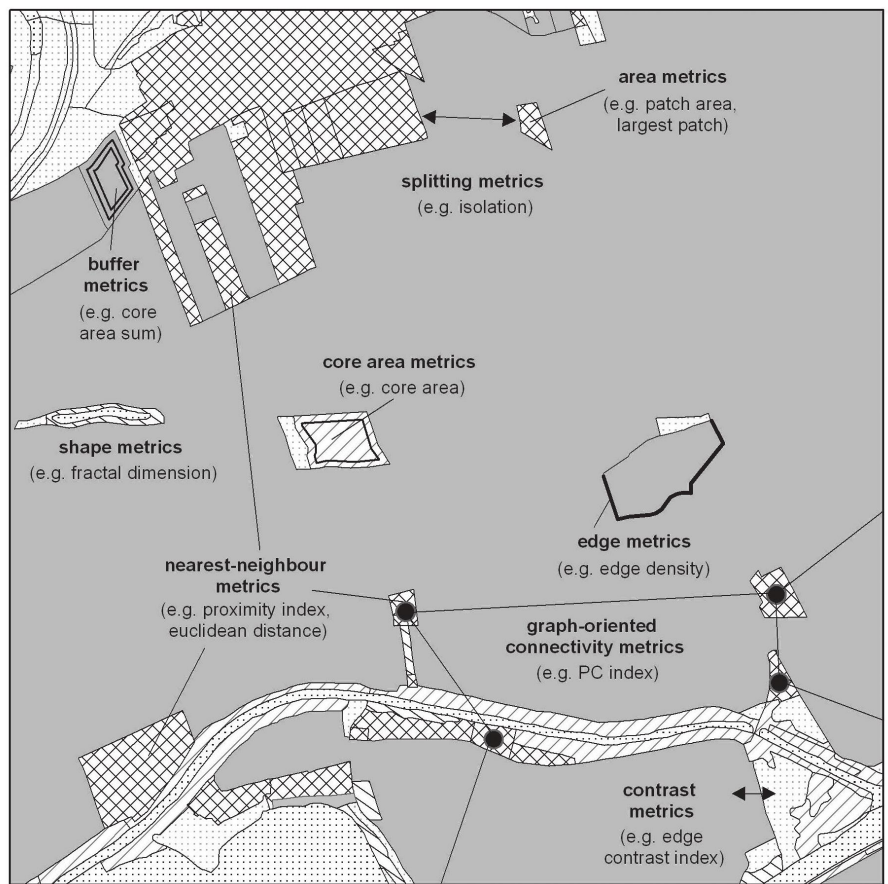
FIGURE 1 Landscape mosaic (example) with landscape metrics (modified and completed Walz 2006)

goals (Stokman and von Haaren 2012). Scientific models and methods (e.g., landscape ecology) must be used to get the best results but in the end, the decision is made by politicians in discussion with the public. Therefore, it is necessary to work with, as much as possible, transparency (Steinitz 2010; von Haaren 2004) to produce convincing results with great acceptance (von Haaren 2004). GIS tools and methods offer capabilities that are helpful in the whole planning process (Lang and Blaschke 2007; Pietsch 2012).

In the landscape planning process landscape functions like regulation, carrier, production, and information functions must be analyzed (Jessel and Tobias 2002; von Haaren 2004; Lang and Blaschke 2007). For nature conservation, the regulation function is the most relevant (Weiers et al. 2004). Therefore landscape ecology defined as a problem-oriented science, can provide methods for the different planning steps. But to optimize the knowledge-transfer between landscape ecology and spatial planning landscape ecology must co-evolve (Opdam et al. 2002). "In decision-making on future landscapes, landscape planners, landscape managers and politicians are involved in a cycling process" (Opdam et al. 2002).

LANDSCAPE METRICS

The most commonly used concept to relate patterns to processes in landscape ecology is what is known as the patch-corridor-matrix model (Forman 1995; Walz 2006) nowadays extended to the gradient model (Mc Garigal and Cushman 2005; Hoechstetter 2009). As a consequence, landscape metrics (LSM) are used as numerical descriptors of the spatial arrangement of landscape mosaics **[FIGURE 1]** (Lang and Blaschke 2007; Hoechstetter 2009). They can be used to analyze landscape mosaics on three levels: patch, class, and landscape (Lang and Blaschke 2007; Walz 2006). Although an enormous number of landscape metrics exist they are not often used for landscape planning projects at the moment (Herberg et al. 2006).

THE LANDSCAPE PLANNING PROCESS

The core tasks and phases of landscape planning are:
· inventory and evaluation
· planning objectives and concepts for development
· proposed planning objectives **[FIGURE 2]** (Warren-Kretzsch mar et al. 2012).

Landscape planning depends on active participation because the implementation of objectives and spatial solutions must be convincing, accurate, and legally defensible (von Haaren 2004; Steinitz 2010; Warren-Kretzschmar et al. 2012). Therefore, methods and tools are needed to explain complex, and often not visible, ecological functions (e.g., biodiversity) and processes to the public and decision makers.
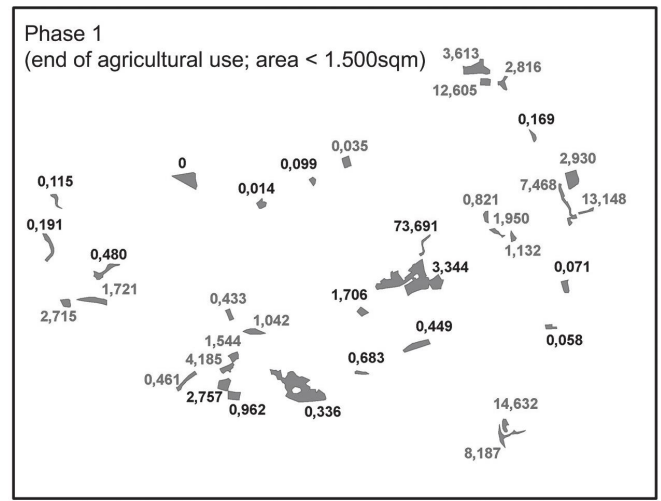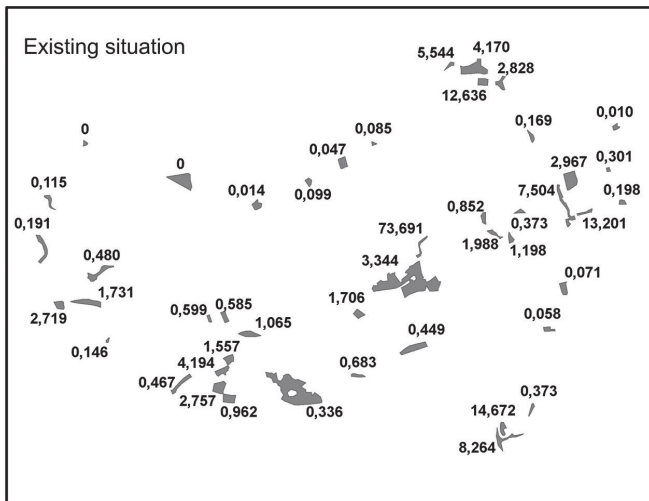
FIGURE 2 Example proximity index (PROX) to evaluate qualitative land use change scenarios (black numbers: status remains unchanged; red numbers: status changes)
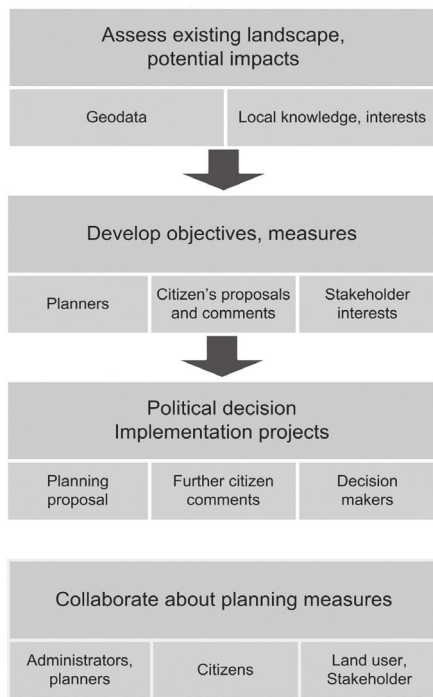
FIGURE3 Typical landscape planning process (Warren-Kretzschmar et al. 2012)

An iterative not linear planning process with interactive communication tools is needed.

LANDSCAPE METRICS IN THE LANDSCAPE PLANNING PROCESS

The following examples give the impression of possible applications using landscape metrics.

Isolation as one of the driving forces of biodiversity loss can be described by several metrics. The proximity index (PROX) was developed to evaluate isolation of patches of the same type within a specified search radius. It is calculated based on the distance and the patch area (Mc Garigal and Marks 1994; Lang and Blaschke 2007). The index can only be interpreted in comparison between different scenarios. Higher values represent less isolated (because of distance or patch area), lower values more isolated patches.

In the landscape planning context the proximity index can be used to evaluate different land use scenarios or to find solutions to improve connectivity in a specific planning area. **FIGURE 3** describes the situation if the agricultural use of a specific land use type (dry grassland) will end during the next fifteen years. The values represent the status of the different patches. Patches with black numbers remain unchanged, red numbers indicate changes in any direction and patches with zero are absolutely isolated. Using the
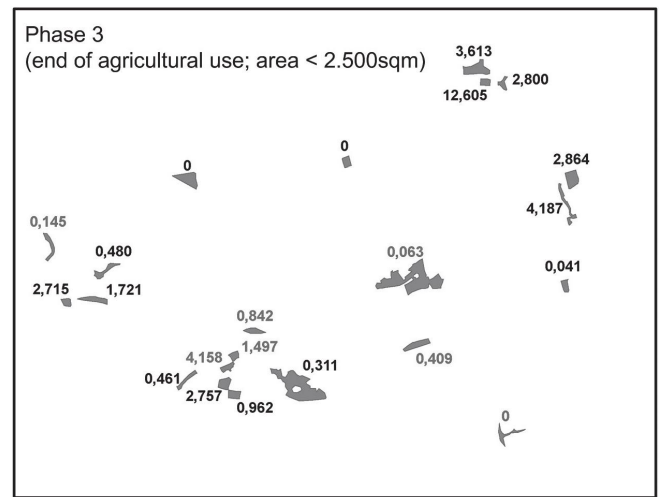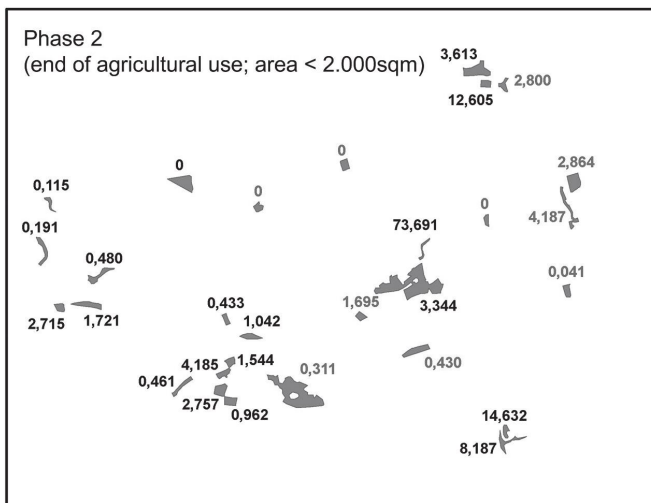
described metrics it's possible to analyze quantitative and qualitative aspects of land use change scenarios in multidimensional perspectives (time and scale).

Using the same index planned measures can be evaluated to find the best and most effective solutions or to discuss different landscape planning solutions in the participation process to find the most convincing results.

Habitat fragmentation involves the disaggregation of existing habitat patches and can lead to reduced dispersal success and enhanced regional extinction of entire populations across the landscape (Jaeger 2002; Lang and Blaschke 2007). While isolation describes existing conditions fragmentation is the underlying process (Blaschke 1997; Jaeger 2002). Splitting index, division index and effective mesh size are indicators to quantify fragmentation.

In **FIGURE 4** the impact of two scenarios should be evaluated. On the left side new forest areas will be planned around existing ones (Scenario 2), on the right side new isolated patches are planned (Scenario 1).

A decreasing division index indicates less fragmentation (Jaeger 2002). While both scenarios reduce negative effects of disaggregated forest patches Scenario 2 is more effective than Scenario 1 [**TABLE 1**]. According to that example it's possible to quantify the existing situation and to evaluate planned measures regarding habitat fragmentation. The

described metrics can be used for evaluation purposes in the landscape planning process and as a decision-making tool in the participation process and for developing objectives and measures.

SCENARIO	AREA IN SQM	D IN %
Existing situation	916.967	96,29
S1	1.030.764	94,64
S2	1.017.425	86,76

TABLE 1 Effect of two landscape planning scenarios on the fragmentation

In addition to the describe methodologies physical and functional disconnection of ecological networks based on land use changes can be analyzed and ecologically interpreted using several graph-theoretic metrics (Pascual-Hortal and Saura 2006; Zetterberg et al. 2010; Pietsch and Richter 2012). In graph-theory a graph depends on links (functional connections) and nodes (e.g., habitats) (Urban and Keitt 2001). Using probability models it's possible to analyze the existing situation (are there any links or not), to evaluate each specific node (importance of each habitat) and to evaluate each functional connection. Using these methodologies
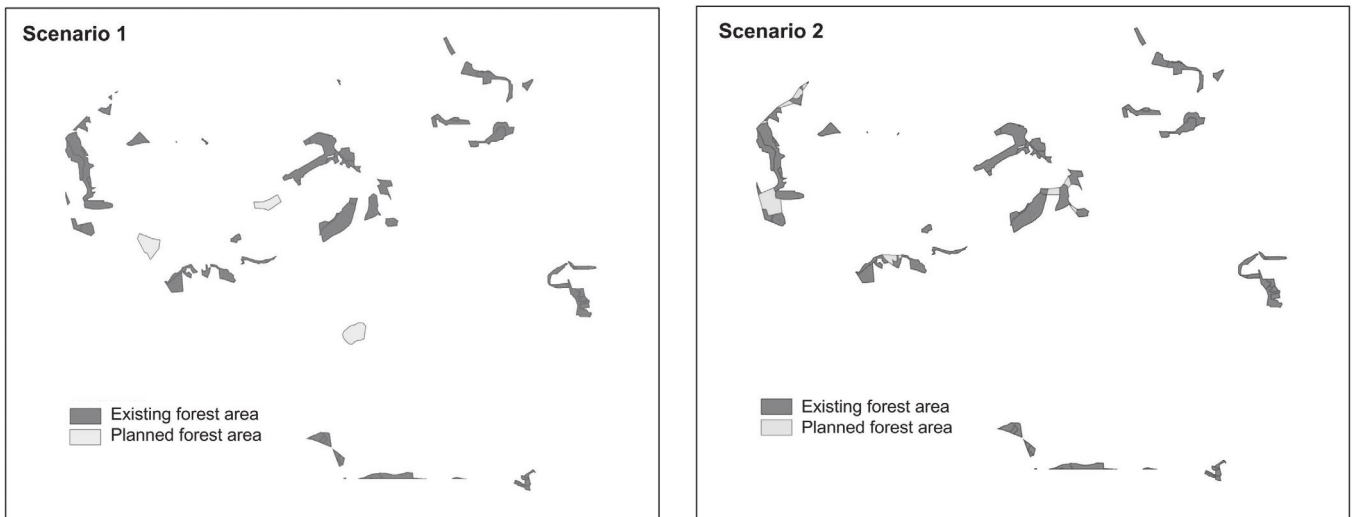
FIGURE 4 Two scenarios for new forest areas

critical parts of a network and missing links can be identified, different patches can be ranked by their importance and natural, man-made or planned barriers and breaks can be found (Zetterberg et al. 2010; Pietsch and Richter 2012). Because the results are easy to understand for experts and lay people it is a powerful evaluation and planning tool to define areas that are most important for specific measures or to visualize different possible scenarios.

CONCLUSIONS

As shown in the examples landscape metrics can be used in different phases of the landscape planning process. They can be used to evaluate different scenarios, objectives or measures. The results are easy to understand by politicians, stakeholders, decision-makers, and the public. They can be used as effective tools in the planning and the participation process. Different scenarios can be calculated easily and the most convincing and effective measures may be found in an interactive participation process. Easy to use and free available software tools for vector and raster datasets are available to calculate landscape metrics. On the other hand expert knowledge is needed to verify the results and to select the right and useful set of landscape metrics for the specific question (Di Giulio et al. 2008). Software tools are available but in some cases (e.g., graph-theoretic metrics)

ecological knowledge is missing (Pietsch and Richter 2012) or uncritical interpretation of the results might lead to false solutions (Lang and Blaschke 2007; Filip et al. 2008). Nevertheless, methodologies are available that have the potential to improve the landscape planning process in the future.

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THE MEGAREGIONAL COMMON: A FRAMEWORK FOR THINKING MEGAREGIONS, INFRASTRUCTURE AND "OPEN" SPACE

GEOFFREY MARK THÜN
University of Michigan, Taubman College of Architecture and Urban Planning, USA
gthun@umich.edu

Geoffrey Mark Thün is an associate professor at the Taubman College of Architecture and Urban Planning at the University of Michigan, and founding partner of RVTR in Ann Arbor and Toronto. He holds a M.UD (Toronto), a B.Arch BES (Waterloo), and a BA.Soc (Western Ontario). RVTR received the 2008 Young Architects Forum Award for their portfolio of design from the Architecture League of New York, and were awarded the 2009 Canadian Professional Prix de Rome in Architecture. RVTR's work has been recognized with a 2010 OAA Award of Design Excellence, a 2010 R&D Award of Excellence from *Architect Magazine*, and a 2011 RAIC Award of Excellence for Innovation in the practice of Architecture.

KATHY VELIKOV
University of Michigan, Taubman College of Architecture and Urban Planning, USA
kvelikov@umich.edu

Kathy Velikov is an assistant professor at the Taubman College of Architecture

and Urban Planning at the University of Michigan, and founding partner of RVTR in Ann Arbor and Toronto. She holds an MA. in Art History (Toronto), a B.Arch and BES (Waterloo). RVTR received the 2008 Young Architects Forum Award for their portfolio of design from the Architecture League of New York, and were awarded the 2009 Canadian Professional Prix de Rome in Architecture. RVTR's work has been recognized with a 2010 OAA Award of Design Excellence, a 2010 R&D Award of Excellence from *Architect Magazine*, and a 2011 RAIC Award of Excellence for Innovation in the practice of architecture.

DAN MCTAVISH
University of Michigan, Taubman College of Architecture and Urban Planning, USA
dan@rvtr.com

Dan McTavish is a lecturer in architecture at the Taubman College of Architecture and Urban Planning at the University of Michigan, and a design/research associate at RVTR in Ann Arbor. He holds a M.Arch (Michigan) and a B.AS. (Waterloo). His research focuses on and explores the political projects of architecture and the agency of design.

megaregions / landscape infrastructure / renewable energy landscapes / the commons

Megaregions constitute an emergent urban phenomenon intensively debated, theorized, analyzed, and studied within the planning and design professions. The geographic scale and polycentric character of megaregions confounds traditional notions of city and hinterland, of center and periphery (Soja 2000). Understood as intra-regional and inter-regional flows, the geographies of energy, production, and waste can no longer be considered externalities in relation to urban centers [**FIGURE 1**]. These geographies constitute material, spatial, and political territories implicated through the production of urbanized landscapes simultaneously increasingly visible and invisible, intertwined and fragmented. As urban formations that have developed in evolutionary ways, rather than through structured planning, much current work has focused on methods of apprehending the nature of megaregions; their boundaries, settlement patterns, and dynamics a as new units of analysis, policy, and planning (Thierstein and Forster 2008; Ross and Woo 2009; Dewar and Epstein 2007)

In this context, the lens of the common becomes productive in thinking megaregions and their possible futures. The
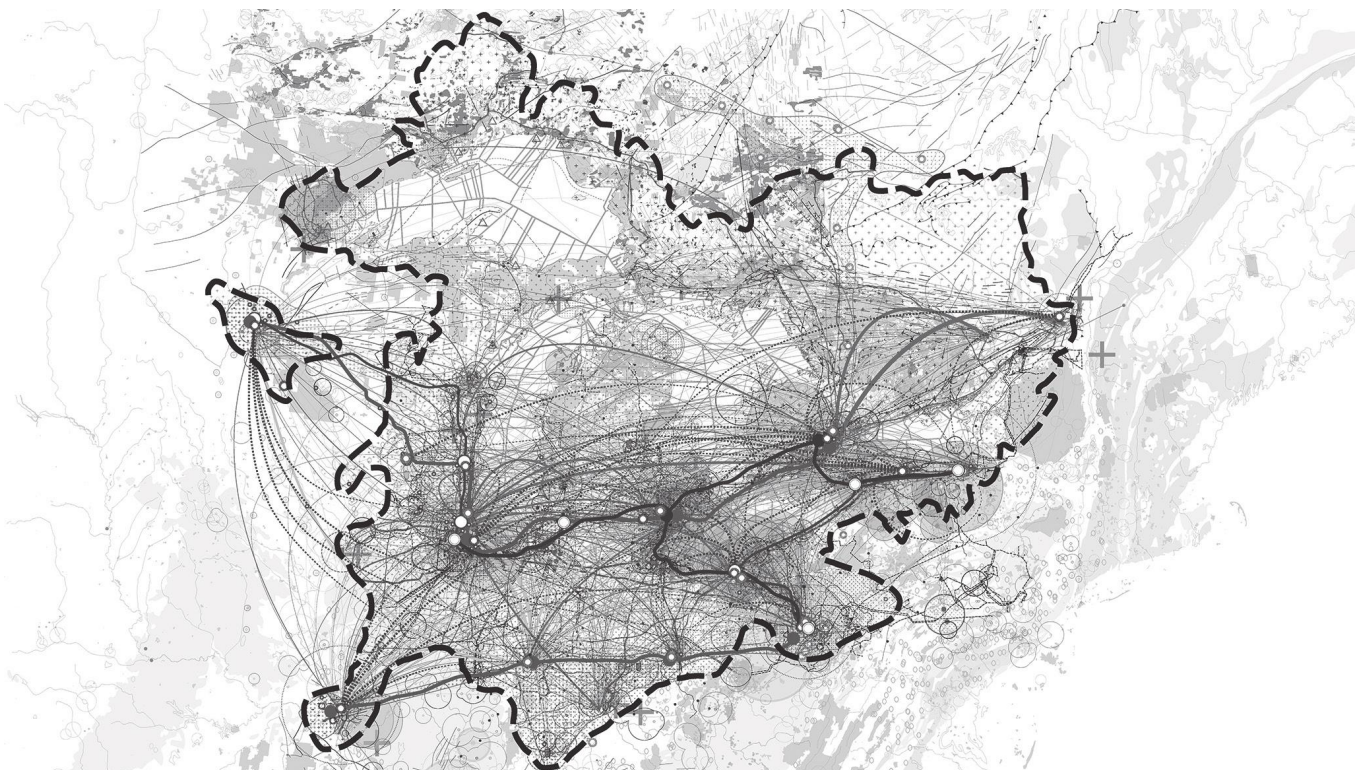
FIGURE 1 Shed cartographies describe territories that spatialize not only the material ecologies of attendant flows and exchanges but also begin to reveal critical synergies, potential opportunities, gaps and strategic points of design intervention within these networks. (image courtesy of the authors)

design of infrastructures, as both possible realities and real projective projects suggests a potential beyond the delivery of organization and service: how might these systems and their associated landscapes radically define and enable a reconceptualization of megaregional publics, political subjectivities, and "open" space? These ideas are discussed through the work of a recent project by the authors entitled "Conduit Urbanism" that explores the hybrid infrastructural landscapes of new energy and mobility in North America's Great Lakes Megaregion (GLM) (Thün and et al. 2012). The project is conceived across a set of nested scales: from the projection of vast fields of offshore wind production, to networks of bundled distribution and connectivity, to nodes of systemic exchange implicating sites of public engagement. It includes the production of a traveling exhibition intended to engage new publics in both the space of the project and its various debates.

A MEGAREGIONAL COMMON

The "common" is characterized by the notion of "open access and self-management" across two primary forms: the material common and the cultural common (Hardt 2012). The material common concerns "environmental" resources such as land, water, forests, fisheries, air, etc., and their openness to all with respect to "equal access to and profit from, not specifically in terms of money but in availability" (Hardt 2012). The cultural common is that common property "such as genetic material, knowledge, and cultural assets," which are potentially open for all to access and contribute to over time (Harvey 2011). The management of the contemporary common, due to scale and the number of individuals implicated, requires "a 'nested hierarchical' structure of decision making, rather than direct negotiations between individuals," mediated through direct democratic participation (Harvey 2011). Both the material and the cultural common are currently under assault from increasing privatization and commodification, and, like democracy, require constant vigilance to maintain their openness. The megaregion introduces a new scale of physical and constitutional consideration, neither that of the city, state, nor nation. The implications for this new jurisdictional model warrant a reconsideration of the common in thinking design, infrastructure, and territory.

THE RESOURCE COMMON

The development of Norway's oil and natural gas reserves in the North Sea can be understood as a possible approach toward a material common. The surpluses generated from this development in the form of taxes on corporations, exploration licenses fees, as well as the Norwegian government's

FIGURE 2 Graphic synopsis of the Conduit Urbanism proposal for the Great Lakes Megaregion. (image courtesy of the authors)

Direct Financial Interests as managed by Petoro AS, is utilized to benefit Norway's population (Petoro). Surpluses are invested in The Government Pension Fund of Norway on behalf of the Norwegian people by Norges Bank Investment Management following the advice of the Norwegian people through discussions in Parliament. The fund ensures that once the shared resource of oil and gas is depleted, the surplus capital generated by its exploitation will go to the collective benefit of future generations (Norges Bank Investment Management 2011). While not without problems, this model moves towards "the socialization of surplus production and distribution and the establishment of a new common of wealth open to all" (Harvey 2011).

Within the Conduit Urbanism proposal, wind and water are conceived of as common resources that precipitate the formation of the GLM Energy and Water Common, a pan-national agency of governance and wealth management. The substantial profits from new renewable energy production (primarily via the 320 GW of available wind energy in the vicinity of the Great Lakes), are directed not to private profit but towards a new public infrastructural network, overlaid upon the current right-of-way of major highways (the meta-system around which existing urbanization in the region has been produced) **[FIGURE 2]**. The resulting system produces both new forms of governance, and demands

new jurisdictional representation in order to steward the resources for a megaregional public. Turbine fields become a palpable transformation of the renewable energy landscape, emerging in parallel with a new political and public imaginary of the energy commons.

NETWORKED INTERCHANGE COMMON

In the early nineteen-twenties, planner Benton MacKaye proposed his vision for the Appalachian region open space network. MacKaye conceived of a pedestrian trail along the Appalachian Ridge, extending from the state of Maine to the state of Georgia that would serve as a common recreation space for the rural communities adjacent to it (MacKay 1921). The trail would become an organizational spine for public access and public utility; connecting transportation, hydroelectric networks, coal mining, and communities, while also serving as a break and lookout for forest fires (Easterling 1999; MacKay 1921). Open space would organize and construct regional identity, facilitating access and apprehension.

Conduit Urbanism leverages the material common to produce new formats of spatial organization, distribution of shared resources, and seed the space of future urbanization. The proposal includes a restructuring of the major regional highways's constituent DNA from a simple, single-purpose

FIGURE 3 New bundled conduit of renewable energy grid-tied high-speed rail and infrastructure along the space of the existing highway system. (image courtesy of the authors)

and single-access surface to an intelligent network of bundled modes of mobility that can provide access for multiple vehicle types, conveyances and speeds, coupling grid-tied modalities, renewable distribution and storage infrastructures [**FIGURE 3**]. Networked with other systems of transit and transport, it forms an open and interconnected corridor that catalyzes and connects regional industries, local communities, environments, and new public architectures along the line.

Large-scaled developments are strategically implemented at existing sites of interchange. These new interchange nodes become critical points of regional transfer, congregation, and exchange. The resulting megastructures organize flows, converge infrastructural systems, and house new hybrid institutions through capital investment enabled via the excess yield of renewable energy. They become the future public spaces and monuments that give identity to the ex-urban megaregional territory. The mobilization of this network of hybrid infrastructures prioritizes action in the periphery versus the central city. A range of adjacent post-industrial landscapes are mobilized through the catalyzation of remedial activities required by legislation, but unsupported by typical development patterns (Belanger 2009). Prototypical interchanges are developed typologically, and through more detailed design proposals at Detroit-Windsor, Chicago, and Toronto. These megastructures contain expanded programs and networked spaces beyond those of the typical node to include specific programmatic concentrations benefiting from access to the infrastructural umbilicus [**FIGURE 4**]. The abstract resources of the material common crystallize into spatial formations, materializing the common into legible and visual public spaces, which, in turn, allow for the enactment of practices towards the cultural common [**FIGURE 5**].

PROJECT(ING) A CULTURAL COMMON

The notion of the cultural common implicates a renewed agency for cultural production. For example, urban and landscape projects not only engage in the material world through the provision of large scale "solutions," but also through the acts of design and dissemination to wider public audiences. This form of cultural activity, itself a material production, can participate in the construction, reframing, and opening up of knowledge as a public act. As part of the Conduit Urbanism project, *Infra-Eco-Logi-Urbanism* was developed as a traveling exhibition, first opening at UQAM Centre de Design in Montreal in the Winter of 2013. The exhibition is intended to operate as a manifesto for urban architecture within the post-metropolitan condition, and to provoke discourse and debate. The exhibition is
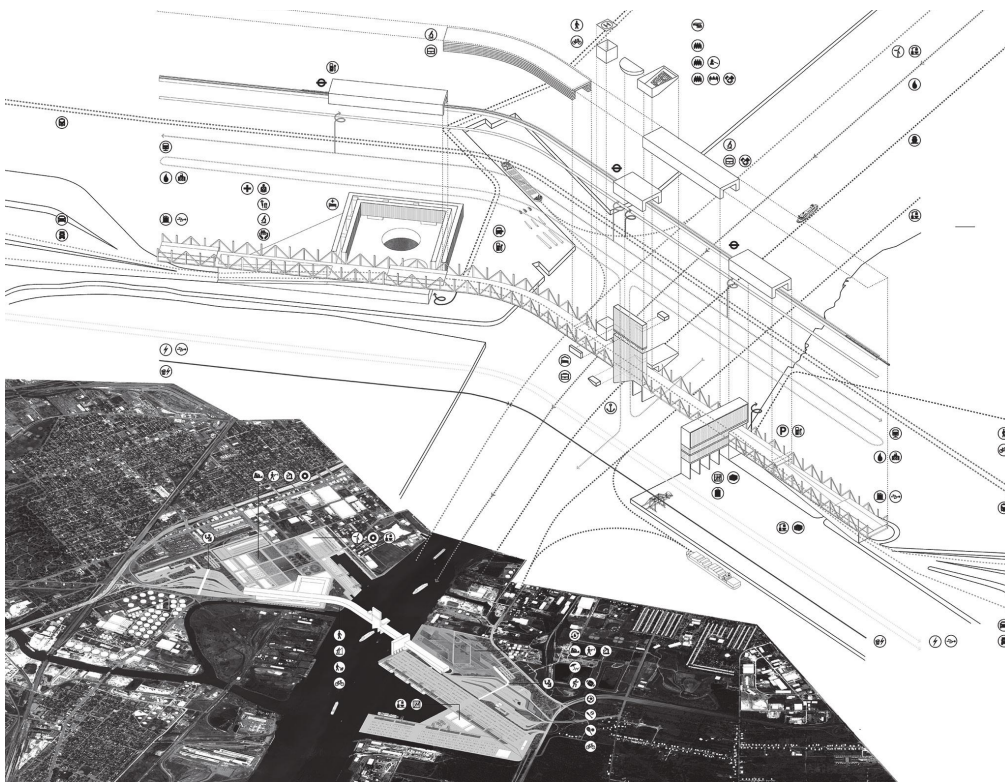
FIGURE 4 The interchange at Detroit-Windsor is an extra-jurisdictional occupied bridge that conflates highly complex regional material transfer, shoreline remediation, and public programs. (image courtesy of the authors)

organized as an open-ended territory of negotiation, gathering a diverse body of work including critical regional cartographies, network analyses, historical research, writings, photographs, design drawings, and physical models. The projective proposals of Conduit Urbanism sit within a field equally privileging related disciplinary histories, operational technological descriptions, images of existing conditions, and documentation of existing political legislation. This aggregate content is presented as a field of suspended illuminated panels. The spatial array of the exhibition allows visitors to simultaneously apprehend multiple interrelations, scales and connections from diverse routes and viewpoints. In so doing, its physical form explicitly engages the space of the cultural common, intended to render through the gaps created via non-linear presentation of fragmentary associations, new knowledge, provocations, and projections.

CONCLUDING PROVOCATIONS
The emerging condition of the megaregion and its extra-urban territories signals more than an opportunity for design activity, but rather as evidence of a moment where a reconceptualization of the material and cultural common might open up whole new conceptions of resources, publics, distribution, and rights. Inherent in the project of Conduit Urbanism is a "utopian aspiration" that is embodied

not only in the futures it projects and the proposals that it contains, but the explicitly political role of its very "real" dissemination as a discursive space of exhibition (Berlage Institute 2007). While the relatively recent interest in and advocacy for design strategies and proposals to "leverage," "couple," or "bundle" instrumentally operable functions with public programs constitutes a potential mechanism for working within these domains, we assert that engagement of the common, and the resulting political questions that ensue, may produce a productive friction for design in apprehending this potential vista. As Harvey states, "questions of the commons, we must conclude, are contradictory and therefore always contested." Behind these contestations lie conflicting social and political interests. Indeed, 'politics,' Jacques Rancière has remarked, 'is the sphere of activity of a common that can only ever be contentious'" (Harvey 2012).
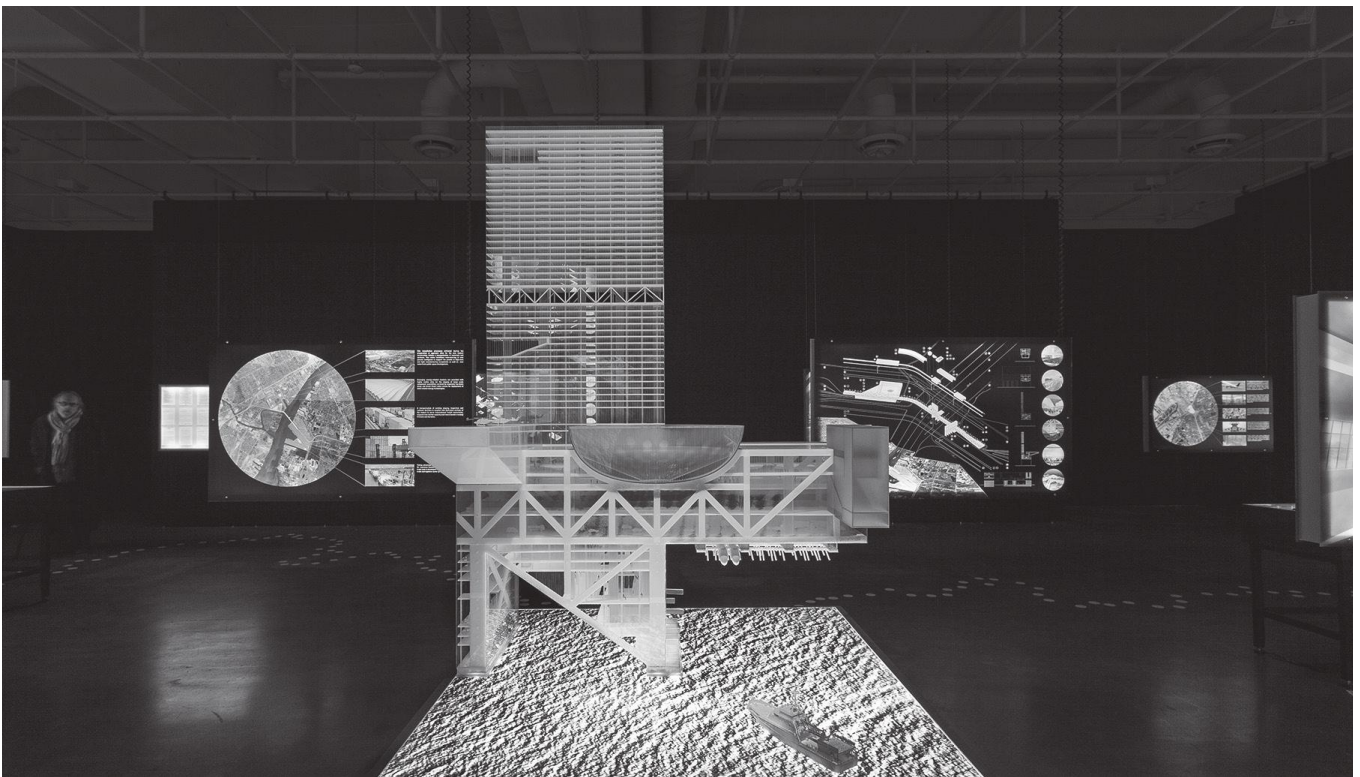
FIGURE 5 Detail sectional model of the Detroit-Windsor interchange at the Center for Great Lakes Governance housing the GLM Energy and Water Common. (photo courtesy of the authors)

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INFRASTRUCTURE TYPOLOGIES IN SUBURBAN LANDSCAPES IN SWITZERLAND AND IN KOSOVO

GUILLAUME DE MORSIER
University of Applied Sciences Western Switzerland, Switzerland
guillaume.demorsier@hefr.ch

Guillaume de Morsier is a Swiss architect graduated from EPFL. He worked for the office KCAP in Rotterdam and Zurich as an urbanist and researcher for largescale urban planning projects. He is co-founder of the office Kunik de Morsier architects and lecturer at the Fribourg University of Applied Sciences, currently working on several projects and researches on infrastructures, housing developments, and adaptations in Switzerland and abroad. Together with Valentin Kunik, they initiated Parallel Sprawl, a collaborative research on suburban landscapes in Switzerland and in Kosovo.

VALENTIN KUNIK
Kunik de Morsier architects, Switzerland
bureau@kunikdemorsier.ch

Valentin Kunik is a Swiss architect and lecturer based in Switzerland. In 2009, he graduated from the Swiss Federal Institute of Technologies in Lausanne, both in architecture and in urban development. He has been working with artists and architects in Switzerland and in

Spain. Since 2012, he has taught construction at Fribourg College of Engineering, Switzerland, to first year students in architecture. With Guillaume de Morsier, in 2010 he founded the office of Kunik de Morsier architects in Lausanne.

ROZAFA BASHA
University of Prishtina, Faculty of Engineering and Architecture, Serbia
rozafa.basha@uni-pr.edu

Rozafa Basha is an engineer of architecture and urban designer educated in Prishtina, Kosovo, graduated in 1975, and in Lund, Sweden, graduated in 2010. Her work experience over the past twelve years ranges from her own practice, designing small-scale architecture, working for different architecture offices in Kosovo on largerscale projects, and on engagements within international governmental and non-governmental projects in the reconstruction of war-damaged buildings throughout Kosovo. She has worked on the management of conservation works of historical buildings, and taught in the Department of Architecture at the University of Prishtina where she is currently teaching, and is pursuing research for a doctoral thesis at the Polytechnic University of Tirana, Albania.

suburban landscapes / infrastructures /
urban planning / urban sprawl

INTRODUCTION

PARALLEL SPRAWL is a collaborative study on suburban landscapes in Kosovo and Switzerland. We are interested in looking at built spaces in both countries that are not city centers, historical centers, touristic hot spots, or in the countryside. This focus is instead on what we usually call here suburbs (Paquot 2008). We assume that these spaces are of a singular importance (with regard to number of households and habitants, infrastructures, and the effect on the landscape, among other aspects) and that we urgently need to develop a specific approach to analyze and project on these areas.

METHODOLOGY

This research is performed in parallel on two situations, the Swiss Plateau and the Kosovo Plateau. As attentive walkers, we document with open eyes, listening to local inhabitants as well as planners in order to give depth and identity to formal quantitative information.
By observing and documenting parallel suburban areas and how they function, we want to highlight their key issues,

reveal their own organizations, similarities, and differences, but also confront them in order to come up with new interpretations and visions (de Certeau 1980).

URBAN SPRAWL
Urban sprawl is a type of horizontal, low-density urban development that took off in the postwar period. Its roots are already found at the turn of the nineteenth century in utopian projects such as garden cities where air, light, and public health were considered as new design factors. In the nineteen-fifties, at the time of Europe reconstruction, the model of the villa in the outskirts of cities took its big boom, facilitated by a thriving car industry, an expansion of the highway network, and energy at a very low cost (Duany 2000).

Fifty years later, this model has spread to most parts of the world that saw the emergence of a middle class. Today, these places have become nightmares for planners and local actors, but also often for their inhabitants (Debry 2012).

Living in suburban areas has become more and more restrictive and problematic as these areas are mono-functional, highly energy consuming, and often accessible only by car. Suburban areas were never built close to schools, places of leisure, or congregation or trade venues. The dream of living in the countryside quickly turned sour, and these areas are now often seen as dormitories for the middle class.

Whatever the reason for such an expansion, we believe that these areas have the potential to be adapted and regenerated in order to propose a new type of living environment adapted to our needs but also to global issues (Marot 2002).

SPATIAL FRAMEWORK
Switzerland and Kosovo are both strongly affected by urban sprawl and the resulting landscapes are surprisingly very similar. The fundamental difference lies in the genesis of the landscapes in these two countries: in one, the fruit of fifty years of local planning relying on individual will, the car, and the growth of the middle class; and in the other, the collapse of the state due to a recent war and the rise of self-construction.

Switzerland's Plateau has largely been developed since the fifties, creating a continuous suburban area where major cities of the country are located. Highly decentralized planning has completely transformed the Plateau and has led to many disadvantages such as an important increase in the consumption of natural resources but also a radical transformation of the visual environment of this part of the country [FIGURE 5 + 6].

In Kosovo, it is only since 1999 that rapid suburban urbanization invaded the country (Vöckler 2009). At that time, the country was just starting to recover from a devastating war in which a large number of family houses were destroyed. At the end of the war, major international aid provided residents with the necessary reconstruction materials, allowing them to build new homes in a total lack of a legal. Now that the bubble is over, a large part of the plains has already been built to include family houses and commercial infrastructure [FIGURE 7 + 8].

INFRASTRUCTURES
The impact of urban sprawl development is far beyond a transformation of the visual aspect of the territory. It is also a transformation of geographical relationships and interdependencies and an adaptation of an urban infrastructural system to a suburban or rural context where densities and dimensions are stretched out (Dumont 2010).

Urban sprawl relies on much larger systems that are invisible

FIGURE 1 Multilayer infrastructures in a Swiss suburb (Langental)

FIGURE 2 Swiss Villa

FIGURE 3 Railway tracks in a suburb around Prishtina

FIGURE 4 Kosovo Villa
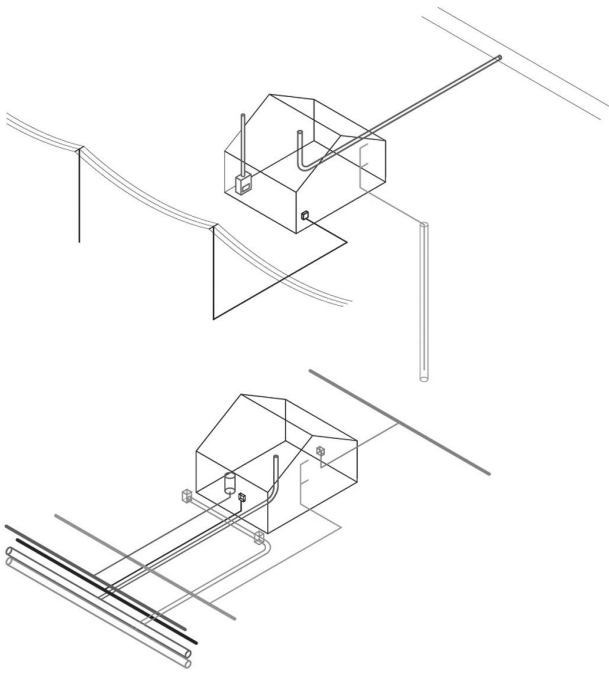
FIGURE 9 Infrastructures in Switzerland and Kosovo
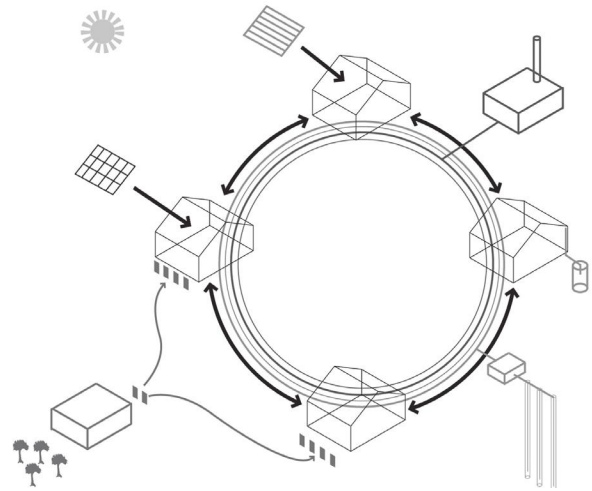
FIGURE 10 Intermediate scale of intervention

but indispensable to any urban setup. We call these systems infrastructures. With the term infrastructures we mean here technical systems such as mobility, waste, water, sewage, food, or communication, but also social and economic infrastructures (Sievert 2003).

In Switzerland, the expansion of suburban areas has been made possible by the great importance given to infrastructures in the country. Huge investments were made to develop a decentralized transportation grid made of roads and railway system. At the same time the transition from agricultural land use to suburban facilities such as low density housing areas, large scale commercial areas, or industrial zones was facilitated by decentralized governance where municipalities were, for a large part, responsible for their land use planning [**FIGURE 1**].

The typical built form of the Swiss suburban landscape is the villa. This house usually hosts one family and has been built by a group of six to eight on a former agricultural field separated into lots. The agricultural road system is maintained and underground infrastructural systems such as water, sewage, and electricity connect these houses to larger networks (Bassand 2005). Even if remote, these settlements remain also highly connected in term of facilities. Roads and public transports connect these houses to facilities such as schools, commercial areas, villages nearby, and surrounding

cities. These areas mostly located in the Plateau are mostly strictly mono-functional and are therefore relying on this complex and multilayered infrastructural grid (Diener 2006) [**FIGURE 2**].

In Kosovo, suburban developments took place without planning framework. The first ones were the family houses, often built to replace their former house destroyed during the war in another place, often on a lot that already belong to the family (Vöckler 2009). The geometry of these fields is narrow and deep, and the first house was often quickly followed by similar houses built for family relatives, usually sons. Built in a hurry, this first generation of suburban developments was made step by step with a very small amount of money and ten years after, most of them still remain uncompleted. In that case, infrastructures were never planned and these areas still remain cut of major infrastructural networks. Potable water usually comes from a well, electricity is provided through the aerial network, heat is produced with a stove, and the sewage goes either in a septic tank or in a nearby river. The use of the car remains unusual as the oil price is very expensive and public transports don't really exist. We therefore observe nowadays a shift from a place that was supposed to rely on infrastructures to exist; to a place that is forced to create it's autonomy in order to survive [**FIGURE 3**].

FIGURE 5 Built areas on the Kosovo plateau

FIGURE 6 Kosovo urban sprawl

We see the first generation of suburban areas in Kosovo becoming more independent by redeveloping family agriculture, selling local goods in the neighborhood, sharing private transportation facilities or even telecommunication facilities such as the internet and producing heat using wood from nearby forests. The physical environment is being transformed towards more openness and exchange. Limits between private and public spaces are blurred and gradual, and offer space for new kind of uses and exchanges **[FIGURE 4]**.

INTERMEDIATE SCALE OF INTERVENTION

Urban sprawl is often considered as an urban form shaped by its individuality. We assume now that urban sprawl has the potential to be adapted in order to become more independent and self-sufficient and to build stronger relationships to its direct environment instead of being erased. While suburban settlements in Kosovo have to face a lack of infrastructures and to adapt their typologies in order to become autonomous and livable, Switzerland, has now to face the question of the maintenance of its infrastructures and its possible shrinking in order to make suburban areas less expensive and more sustainable. With a redistribution of the priorities in the investment of public funding, it could soon become very difficult to maintain existing infrastructures. In this scenario, Kosovo's models of spatial adaptations

are becoming interesting in a Swiss over-infrastructured context.

With our indexing of particular typologies and infrastructural systems we can rethink the relationships between buildings, open spaces, and infrastructures in suburban areas and propose scenarios of adaptations where models of infrastructural autonomy can be applied to suburbs (AWJGGRA-UaDVVTAT 2012) **[FIGURE 9]**.

We propose an intermediate scale approach, not tending towards large scale infrastructure, neither towards building autonomy but developing step by step an integrated local network of interconnected small scale infrastructures transforming pieces of suburban areas into more sustainable and autonomous neighborhoods.

This intermediate approach is multilayer and brings a set of new infrastructures on the existing built fabric such as energy networks, collective water treatment, shared open spaces, or places for education or economic activity. Such a strategy allows an integration of several services into one combined infrastructures built at the scale of a community for the community itself **[FIGURE 10]**.

CONCLUSION

However urban sprawl can be seen as a very sympathetic typology in very different regions, this study has reveal very

FIGURE 7 Built areas on the Swiss plateau

FIGURE 8 Swiss urban sprawl

different systems of relationships and infrastructures. But consequences of this type of urban development have, in any case, strong impacts on environment as well as on society and economy. This study propose to redevelop on the existing and to enable a transformation process that superimpose a new set of technical, social, and economic structures and infrastructures at the scale of a neighborhood in order to aggregate buildings but also citizen around one shared network of collective infrastructures.

ACKNOWLEDGMENTS

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HYBRID TOURISM-RELATED STRUCTURES— REVISITING THE WESTIN BONAVENTURE HOTEL

JENS CHRISTIAN PASGAARD
The Royal Danish Academy of Fine Arts,
Schools of Architecture,
Design and Conservation, Denmark
jens.pasgaard@kadk.dk

Jens Christian Pasgaard (born in 1973) graduated as an architect from The Aarhus School of Architecture in 2000; has been working for Schmidt Hammer Lassen and Dorte Mandrup Arkitekter (two Danish architectural offices); and has been doing minor architectural projects in his own practice (parallel with academic work). Since 2004 he has been affiliated with The Royal Danish Academy of Fine Arts, Schools of Architecture, Design and Conservation where he has been teaching and conducting research.

tourism planning / tourism-dominated spaces / strategic landscapes /
hotel architecture / Los Angeles

AN INTRODUCTORY NOTE

This article is rooted in theories presented in the PhD dissertation *Tourism and Strategic Planning* (Pasgaard 2012) and features a number of much discussed concepts related to the complicated phenomenon of tourism and to the discipline of strategic urban planning. It is beyond the scope of this article to enter a detailed discussion of all mentioned concepts; however, it is important to set the stage by providing a few compressed notes on the overall approach to the phenomenon of tourism. Corresponding to the fluid transition between chores of everyday life and tourism behavior, the tourist space is not an unequivocal spatial specification. Rather, tourist space is a temporary condition, which depends on tourism activity and the mode of the observer. It is essential to understand and accept the liquidity of the tourism phenomenon and remember that tourism behavior and tourist space are relative concepts (Pasgaard 2012). The underlining premise for the following analysis is that interference between tourism-related and everyday-related flows and activities, generally speaking, is a positive and desirable urban quality.

FIGURE 1 The Westin Bonaventure Hotel. The atrium hotel occupies an approximately 13,500 square-meter plot in Los Angeles's downtown-grid. Photo: July 25, 2008

THE IMMEDIATE CONTEXT OF THE WESTIN BONAVENTURE HOTEL

In 1948 the city of Los Angeles established a new public sector agency, the Community Redevelopment Agency (CRA), which was appointed to lead a number of urban redevelopment projects all over the city. From the nineteen-fifties onwards, a number of CRA-produced downtown planning documents were adopted by the Los Angeles City Council. Hereby the CRA and the City Council initiated a long and unusual brutal transformation of especially the western area of the downtown district (Loukaitou-Sideris and Banerjee 1998, 28). The CRA created a tabula rasa situation in the Bunker Hill area by clearing all 396 existing buildings, by displacing 11,000 mostly low-income residents, and by (partly) flattening the "hill" (Soja 1996, 214). After the extensive land clearance process, the CRA merged existing plots and constructed a new grid-structure of superblocks, which were sold cheap to large-scale developers. The Westin Bonaventure Hotel (WBH), designed by the architect and developer John Portman, was completed in 1976 as one of the first cornerstones in this new razed and restructured Bunker Hill area [**FIGURE 1 + 2**].

FROM CRITIQUE TO FASCINATION

The overall market-driven transformation of the Bunker Hill area has been subject of severe criticism and the area has

frequently been portrayed as a postmodern "corporate landscape" embedding "corporate plazas"—often nicknamed "Downtown Inc." (see e.g. Frieden and Sagalyn 1989). Portman's hotel design has been in the epicenter of an academic debate since the mid-1980s, where the critic Frederic Jameson addressed the hotel (1984). To Jameson, the hotel represented a "full-blown postmodern building" (1991, 38), where "the glass skin achieves a peculiar and placeless disassociation from its neighborhood" (1991, 42). And for Jameson this postmodern neighborhood is just as fragmented, distorted and disconnected as the hotel itself. After Jameson there has been a flood of prominent theoreticians (e.g., Soja 1986; Baudrillard 1986) who have addressed the WBH and presumably visited and experienced the atrium space through a critical "Jamesonian" gaze. In the following I will readdress the WBH with the aim to see the hotel not as a piece of postmodern architecture, but as a potent urban landscape containing a number of extraordinary tourism-dominated spaces. From my point of view, there has been an asymmetric (and profound) interest in the downsides of the "new" downtown district and of the hotel itself. Jameson's interpretations are almost thirty years old and many new layers have been added to the grid-structure of superblocks along with a huge amount of new square meters. Today the hotel is dwarfed by a number surrounding

FIGURE 2 The Bunker Hill area in downtown Los Angeles 1967. Most building structures have been razed in order to make space for new superblocks. In this phase, late nineteen-sixties to early nineteen-seventies, most plots were temporarily converted into parking lots. The white line indicates the plot of the Westin Bonaventure Hotel. Photograph reproduced from Anastasia Loukaitou-Sideris and Tridib Banerjee (1998, 22).

FIGURE 3 The public accessible terrace. An elevated green void in a skyscraper dominated grid-structure. Photo: July 31, 2008

skyscrapers (see e.g., Varnelis 2003) providing a dramatically different context compared to the late nineteen-seventies. Consequently, and in relation to the discussion of hybridity, we need to reexamine the WBH in its present-day immediate context. I believe that there are at two important lessons to be learned, which will be elaborated in the following two paragraphs.

LESSON ONE: INFRASTRUCTURAL DESIGN

Basically the hotel is composed of a brutalist concrete base carrying five hi-tech bronze-colored glass towers. The compact hotel features a cluster of extraordinary spaces: the revolving sky bar and restaurant, the "outdoor" glass elevators, the green elevated terrace with swimming pool, and the large atrium lobby space functioning as an introvert "urban living room". The design is in many respects a three-dimensional orchestration of the city [**FIGURE 3 + 4**].

In relation to the discussion of hybridity it is interesting that the core tourism business, anchored in the 1,350 rooms, is literally lifted from the ground. In that way, Portman liberates a six-story high lobby space which can serve multiple purposes framing both tourism-related and everyday-related activities [**FIGURE 5**].

The hotel can be described as a piece of urban infrastructure—a three-dimensional connecting node composed of linking surfaces at different levels [**FIGURE 6**]. These linking surfaces along with the gallery lobby floors (flanked by modest independent shops and restaurants) and especially the exterior balconies (facing the highway ramps) create a vast amount of unprogrammed square meters, which give the hotel a character similar to a public space. Some areas have an almost liminal character—places for undefined activities.

The base structure is equipped with several entrances (both at ground level and at the gallery lobby floors), as well as with several bridges, ramps, stairways, escalators, and elevators that make the base easily accessible from all directions. In that way the hotel sends out tentacles in multiple levels and directions, and thereby forms part of the local infrastructure. The entire hotel is like a moving object consisting of vertical corridors facilitating easy access from the private rooms to the base-structure. The skywalks provide easy access to the local network, the base-garage is almost directly connected to ramps to Los Angeles's comprehensive freeway network, the hotel's central tower is equipped with heliport (linked to Los Angeles's international airport) and there are only 400 meters to the nearest metro station.

Thus, the hotel can be described as a sort of hub where the local meets the global and where business meets pleasure. It is a place where the distance between "to be connected" and "to be disconnected" is reduced to an absolute minimum

FIGURE 4 The atrium lobby space. Photo: July 25, 2008
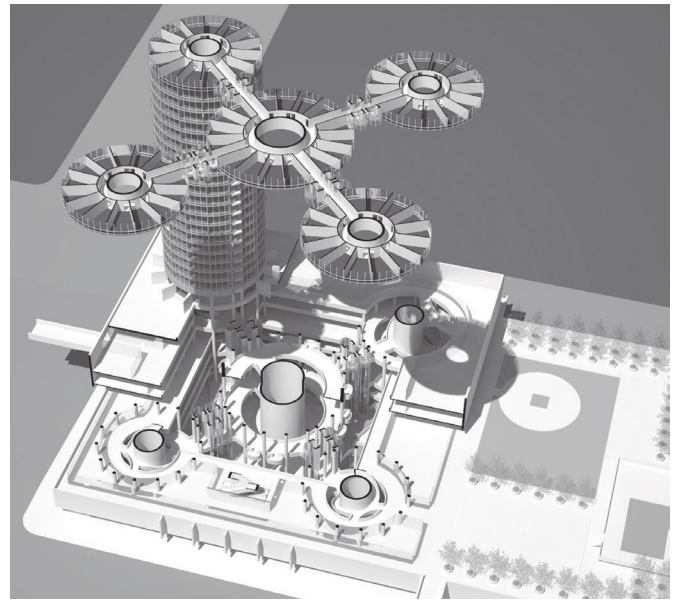
FIGURE 5 3D-section. A typical hotel storey containing seventy-two rooms served by no less than twelve elevators. The rooms are lifted out of the busy fabric below and the elevators literally lift the guests up through the glass roof—like penetrating a membrane detaching the five towers from the pulsating life below.

and the spatial complexity provides a clever relationship between the exposed and the non-exposed. Portman hereby establishes an atmosphere where different social realms are overlapping and interacting—the space is a conjunction of stylish and trashy. Today the WBH can be described as a cleverly integrated tourism structure that accommodates positive interference in different forms and at multiple levels.

LESSON TWO: LOCAL PLANNING

The design and spatial organization of the Westin Bonaventure Hotel should be read as a product of negotiation between Portman, the investors (which included Portman himself), and the powerful CRA.

One specific aspect of the overall planning operation of the Bunker Hill area turned out to have significant impact on Portman's architectural design; namely, the issue of public access.

The CRA strived to create a continuous elevated pedestrian level—a "new ground" connected by "sky-walks." This was achieved by posing explicit demands to ensure "public uses throughout the project area" (CRA 2011). In this way, the CRA devised a planning foundation stimulating pedestrian circulation at multiple landscaped levels—in-between, over, under, around, in, on, and through the different mega-structures providing various public amenities (open spaces,

pocket parks, playgrounds, public art, etc.) Importantly, this was in exchange for enhanced development rights beyond the constraints of zoning ordinances (Loukaitou-Sideris and Banerjee 1998, 89). In reality, it meant that the financing of public space was traded for the possibility to build more square meters.

The downside of this overall planning approach was obviously that the design, maintenance and management of most open spaces to a great extend were (and are) carried out by private corporations. On the other hand, this strategic move caused that the Bunker Hill area became loaded with semi-public spaces creating cross flows of people with different errands.

CONCLUDING NOTES

In this article I have addressed the phenomenon of tourism at a very local planning level with the aim to inspire future strategic planning.

The case study shows that it is essential to pose qualitative demands not just to the urban fabric and immediate context of new hotels (or other tourism-related programs) but also to the design (and management) of the specific lobby floors and landscaped terraces. A certain percentage of these extra-ordinary square meters must be accessible for people with mixed errands in order to establish positive interference and
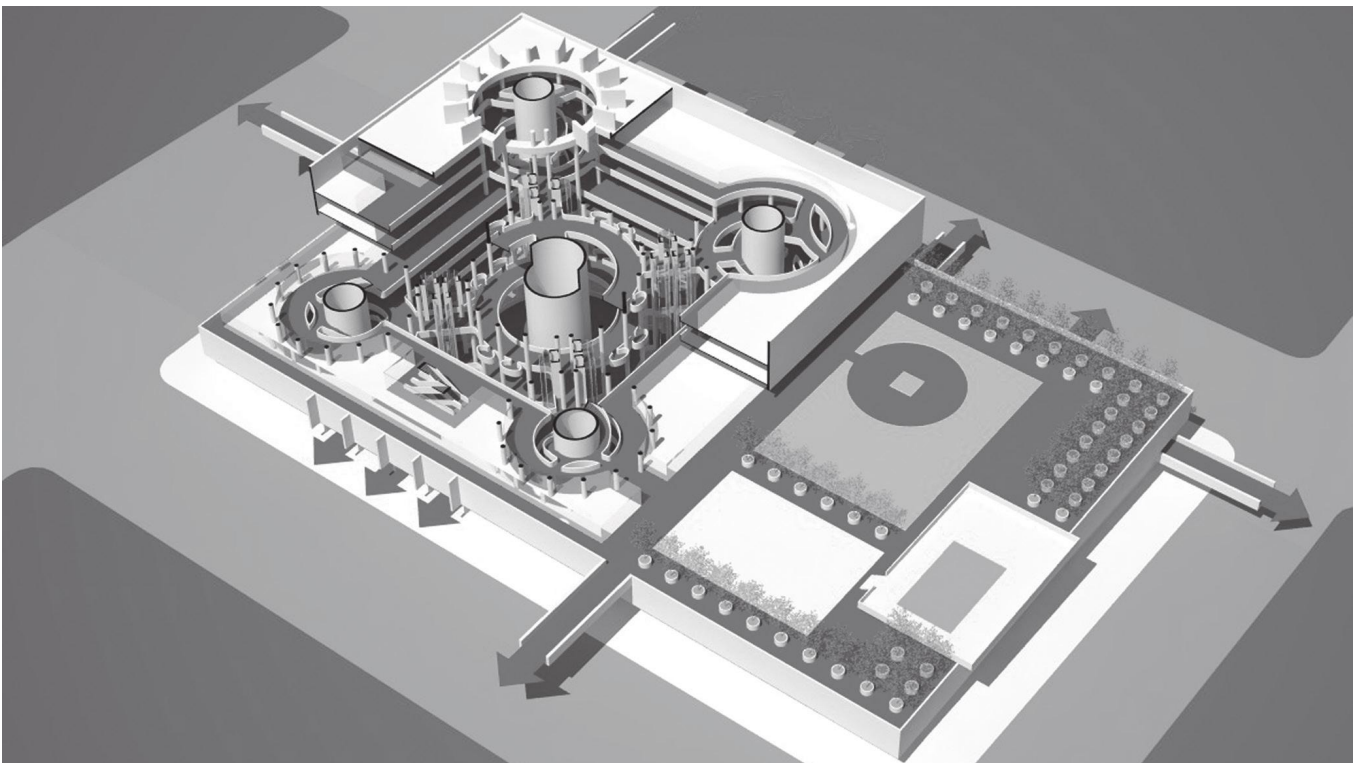
FIGURE 6 3D-section. Publicly accessible linking surfaces with arrows

in order to utilize the lobbies and landscaped terraces as linking spaces within the urban fabric. With the concept of positive interference in mind, I will claim that the most successful tourism-related structures are those able to superimpose extraordinary spatial experiences in an otherwise ordinary context. In that way, the structures will add (not reduce) spatial opportunities in the otherwise ordinary fabric.

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WATER AND STRUCTURES

THE WATERFRONT LANDSCAPES AND
THE HISTORIC HARBORS IN THE SULCIS ARCHIPELAGO

EMANUELA ABIS

University of Cagliari, Faculty of Engineering and Architecture, Italy
emabis@unica.it

Emanuela Abis is an associate professor of Urban and Regional Planning in the Faculty of Engineering and Architecture, Cagliari University. She is coordinator of the Master of Science in Architecture program and of the PhD Architecture course. The fields of research are focused on planning processes, management of urban development, aimed at issues of the Plan construction, of the relationship between settlements, mobility and infrastructures, of the landscape safeguard and design, of strategic environmental assessment and of sustainable urban regeneration. Abis is principal investigator of the research group UrbsLab and of the research project "Cagliari, procedures and models for integrated development of cultural heritage." Cooperating on these issues in research programs with institutions, she provides advice to public authorities for the design of urban master plans.

ADRIANO DESSÌ

University of Cagliari, DICAAR, Italy
adrianodessi@unica.it

Adriano Dessì is an architect PhD and researcher at DICAAR, University of Cagliari. II level of Master's degree and PhD in architecture. The fields of research are focused on landscape mutations between modernity and tradition. He joined the research group for the project on sustainable landscapes for MIBAC and his doctoral thesis on rural landscapes of Sardinia was presented at the VI Biennial of Landscape in Barcelona. He is visiting lecturer in Architectural Composition at the Faculty of Engineering and Architecture of Cagliari and here is responsible for landscape design workshop RURBANLab. He is member of ISUF and has received numerous awards in international competitions, twice winning Europan competition in Italy and France. Now, he's going to earn his second master's degree in landscape architecture at the UPC Barcelona.

landscapes infrastructure / landmarks / port-town /
historic landscape / productive landscape

INTRODUCTION

This paper illustrates the main results of the "Research program for the re-organization and development of the Sulcis port system" conducted by the authors in 2012 within a multidisciplinary group at DICAAR, and with the scientific collaboration of the Province of Carbonia Iglesias.

The study explores the relationship of port infrastructures within the landscape scenario of the waterfronts in what is known as the "island sea of Sulcis," which prefigures a specialized system of services and infrastructures in the southwestern area of Sardinia. The archipelago of Sulcis emerges due to the extraordinary landscape complexity in which the sometimes critical relationship between infrastructure and environment has found its form and structure in the historic settlement of the Sulcis "port-towns" (Matvejević 2006) and in their waterfronts, in which the relationship with the sea can be seen as something of cultural and landscape value, a dominant spatial character, even before being a necessary resource.

Sant'Antioco, Portoscuso, Carloforte, and Calasetta now form a complex and differentiated system in the management of
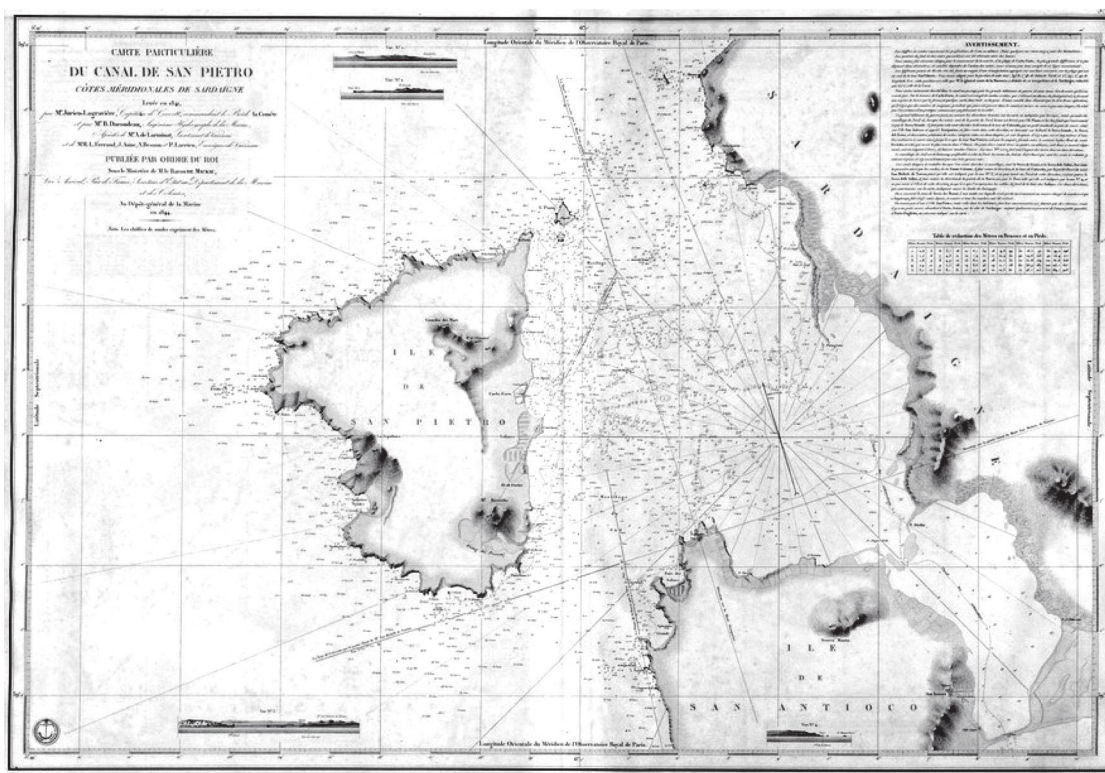
FIGURE 1 The inland sea

this sea. During the 1900s, their infrastructures were expanded within the process of intensification of production and communications, generating considerable changes in this extraordinary landscape [**FIGURE 4**].

Through historical analysis and cartographical study—a central tool in the methodology adopted—it is still possible even today to recognize the "landscape-infrastructure" binomial that characterized the main stages of settlement development in these centers and to divide it into three clearly distinguishable landscape forms:

1. The landscape of the historical late eighteenth century settlements.
2. The landscape of old-modern production systems and landmark-objects
3. The residual landscape and the landscape of environmental degradation [**FIGURE 2**].

THE LANDSCAPE OF THE *HISTORICAL LATE EIGHTEENTH CENTURY SETTLEMENTS*

The approach to the historic urban landscape is, as also expressed in the UNESCO Recommendation, a way of interpreting the ancient towns that goes beyond the concepts of "historic center" or "ensemble" by comparing their *setting* and *land use* qualities with their visual relationship and urban structure qualities. The "inland sea" of the Sulcis

archipelago becomes, in this sense, the place of landscape relations on different scales, the theater (Turri 2004) of the social relations and cultural representations of such centers [**FIGURE 1**].

In Carloforte, the historic urban landscape is shaped between a large port that serves the mining system and fishing, a regular urban design and the well-structured topography described by the coastline and the hills behind it. The original settlement system, bordered on the south by the saltworks, defines a compact waterfront and a linear system of public spaces in front of the sea, which is almost totally absent in the other towns. Calasetta is the realization of a perfect matrix of square blocks laid between a promontory dominated by the Aragonese tower and the flat sandy coves and rocks of the peri-urban areas. The two-way relationship between the urban structure and the sea creates a bi-directionality of views between the small domestic scale of the urban-interior spaces and the large scale of the archipelago. Portoscuso, the only town with sixteenth century origins, presents a more complex and layered historical urban structure: the pre-modern nucleus, built around the old tuna-fishing plant—su Pranu—and the Aragonese tower, was consolidated in the 1700s with the building of fishermen's houses aligned along a NS axis. In the 1800s, however, this nucleus grew around the small harbor close to the historic

FIGURE 2 The three landscape dimensions of Sulcis-Iglesiente

Top map labels (vertical text):

Il promontorio di Capo Pecora
Il sistema dunale di Portixeddu e la laguna bonicata di S.Nicolò, il sistema delle "pisone morte" e degli orti retrodunali
La gola di Buggerru, il sistema dei promontori, delle grotte e degli arenili urbani
L'anfiteatro sabbioso e il sistema dunale di Cala Domestica
Il sistema di Canal Grande
L'isolotto del pan di Zucchero e la costa alta di Porto Flavia
Il sistema delle piccole cale sabbiose di Masua
Il sistema della costa alta di Nebida e dei faraglioni
Il Golfo del Leone, il sistema dunale
Il sistema ambientale della Palude Sa Masa, retrodunale della marina di Gonnesa e il promontorio di porto Paglia

La valle di Fluminimaggiore
Il presaciato del Margine
La costa alta e l'altipiano di Guriondidu
La valle di Iglesias e del complesso metallifero di Monteponi
Il sistema delle pareti roicciose del promontorio di Capo altano
Il sistema del "mare interno" della costa e delle isole sulcitane
La valle del Cixerri
Il sistema naturalistico dell'altipiano Sirai
Il sistema naturalistico lacustre di Matzaccara e Punta trettu
Il sistema dei piccoli appezzamenti delle Curesorgias
Il sistema dei colli vulcanici sulcitani
Il sistema complesso di Candiani delle spiagge e delle saline
L'area umida e il sistema naturalistico-faunistico di santa Caterina e Sant'Antioco
L'area umida e il sistema naturalistico-faunistico degli stagni stagni e delle saline di Sa Pruina
L'area umida e il sistema naturalistico-faunistico degli stagni di Mulargia e di Porto Botte e della foce del rio Palmas
L'arenile di la Salinas, il sistema retrodunale e le saline di Malasima
Il sistema naturalistico-costiero delle lagune di Porto Pino, di Porto Botte e degli ecosistemi retrodunali
Il complesso sistema naturalistico-costiero di Candiani
Il sistema dunale e degli ecosistemi retrodunali

Costa Verde (Nora Piana, Isola di San Pietro, le saline, Isola di Sant'Antioco)

RAPPORTO SUPERFICIE/TERRITORIO COSTIERO

Sulcis Iglesiente
superficie: 1405 kmq
costa: 206 km

Sardegna
superficie: 24083 kmq
costa: 1820 km

IL PAESAGGIO DEI LANDMARKS PRODUTTIVI

Middle map — IL SISTEMA INSEDIATIVO DEI CENTRI DI FONDAZIONE

Fluminimaggiore
ab: 2986
anno di fond. 1704

Iglesias
ab: 27493
anno di fond. 1258

Carbonia
ab: 29764
anno di fond. 1937

Costa Verde

Bindua e San Giovanni
ab: 600 ca
anno di fond. 1870

Bacu Abis
ab: 1900 ca
anno di fond. 1936

San Giovanni Suergiu
ab: 6045

Villarios
ab: 476

Buggerru
ab: 1109
anno di fond. 1864

Masua
ab: 36
anno di fond. 1862(?)

Gonnesa
ab: 5161
anno di fond. 1774

Tratalias
ab: 1102

Cortoghiana
ab: 2600 ca
anno di fond. 1940

Golfo del Leone

Nebida
ab: 960
anno di fond. 1880(?)

Portoscuso
ab: 5263
anno di fond. 1593

Stagno di Santa Caterina

Golfo di Palmas

asse di traffico principale
asse di traffico secondario
linea ferrata
vecchio tracciato ferroviario

Calasetta
ab: 2908
anno di fond. 1770

Sant'Antioco
ab: 11647
anno di fond. VIII sec; rif. 1771

Carloforte
ab: 6410
anno di fond. 1738

La densità media del Sulcis Iglesiente, distribuita su 23 centri è in linea con quella Sarda, con 66,88 abitanti per chilometro quadrato. Il 90% degli abitanti risiede in nuclei di fondazione accentrati di origine mineraria o produttiva. La regione del basso Sulcis, che si sviluppa nell'entroterra è invece costituita da centri di matrice agropastorale a carattere "sparso".

Bottom map — IL PAESAGGIO PRODUTTIVO DEL SULCIS IGLESIENTE

Area produttiva
Bacino minerario
1. metallifero-costiero dell'Iglesiente
2. metallifero di Iglesias
3. carbonifero del Sulcis
vecchio tracciato minerario

Buggerru - laveria, percorso ferrato galleria Henry, edifici ex Miniera Malfidano
Cala Domestica - laveria, percorso galleria Henry, torre costiera e tonnara
Masua - galleria e approdo di Porto Flavia
Masua - villaggio minerario, edifici industriali e percorso ferrato
Nebida - Laveria La Marmora
Funtanamare Gonnesa - Tonnara e villaggio peschereccio
Porto Paglia Gonnesa - Tonnara e villaggio peschereccio
Iglesias - Miniera di San Giovanni e Grotta Santa
Carloforte - Tonnara di Carloforte e Isola Piana
Portoscuso - Tonnara di Su Pranu
Gonnesa - Miniera e villaggio di Seddas Moddizzis
Gonnesa - Pozzi e grandi manufatti, magazzini e uffici di Nuraxi Figus
Fluminimaggiore - complesso minerario di Su Zurfuru
Buggerru - complesso minerario Pilano Bartu
Iglesias - Miniera di Montleponi - pozzi e laverie
Iglesias - Miniera di Monteponi - villa del Direttore
Iglesias - laverie - stazioni di scambio - funghi rossi
Iglesias - Miniera di Campo Pisano
Bacu Abis - Miniera di Bacu Abis
Cortoghiana - Pozzi e grandi manufatti di stoccaggio
Carbonia - Grande Miniera di Serbariu, pozzi, lampisteria grande Centrale elettrica
Carbonia - edifici direzionali e magazzini
San Giovanni suergiu - Santa Caterina - Grande Centrale Elettrica
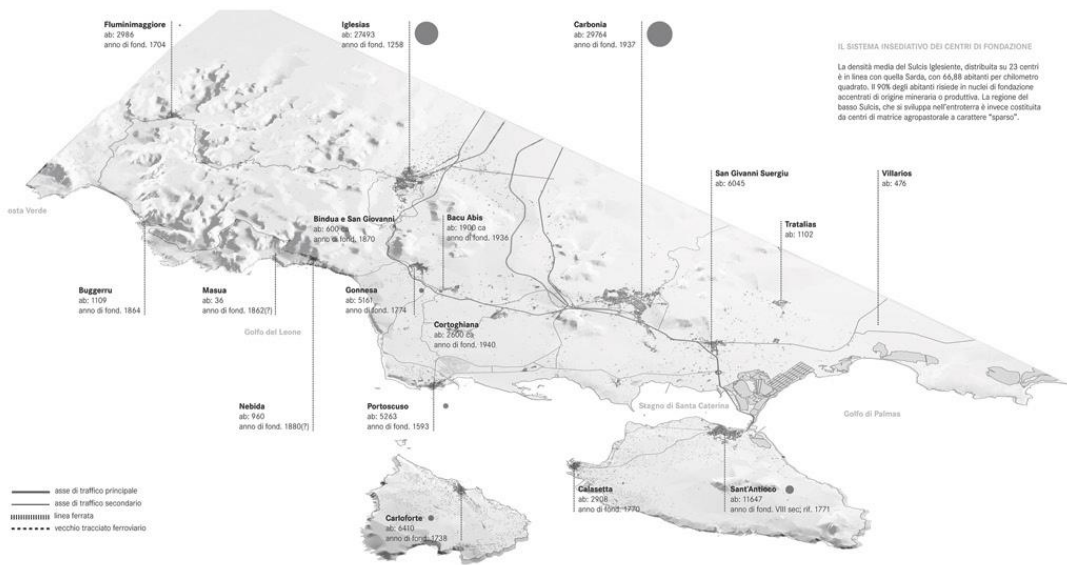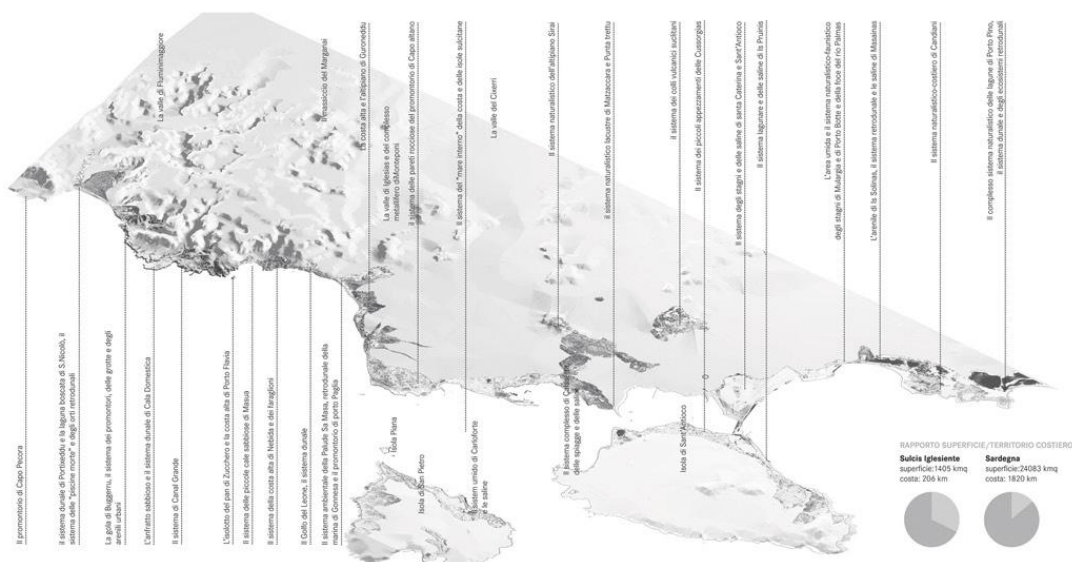Calasetta - Tonnara

FIGURE 3 The Sant'Antioco's urban evolution

FIGURE 4 "port-towns": from left, Calasetta, Carloforte, Portoscuso-Portovesme, Sant'Antioco

FIGURE 5 Diachronic variations of the lagoon-line of Sant'Antioco

fabric. Lastly, Sant'Antioco, the small town built around the church of the same name from the late-Roman period, was well placed on the hill slope and away from the lagoon coast and grew after the arrival of the Piedmontese, through an urban structure with transverse axes and compact blocks that develop down towards the coastline, creating a small system of mooring berths and a small waterfront **[FIGURE 4 + 5]**.

THE LANDSCAPE OF *OLD-MODERN* PRODUCTION SYSTEMS AND LANDMARK-OBJECTS

The regionally based analysis of the historical landscape shows that the territory was affected by the construction of large objects that constitute a common landscape reference.

The peculiarity of "out-sized" power stations, plant towers, washing plants, wells, and winch rooms, due to the *form-function* relationship of mining architecture, now seems emblematic in its iconic and "iconemic" recognizability (Turri 2004) inside a landscape for large, standardizing, complex, and dispersive structures, such as those traditionally found in an industrial landscape.

Carloforte accentuates its role as a harbor that serves such production systems, yet remains quite distant from the intensification of this kind of infrastructure. This is also true for Calasetta that sees its small harbor growing essen-

tially as a pleasure craft marina, while Sant'Antioco, with the construction of the coal industrial port on the southern side of the isthmus, became the seat of one of the most important ports in the Mediterranean: the discovery of the coalfields in the nineteen-thirties and the strong economic development, significantly increased the size of the small town and saw the creation of out-sized industrial objects that clutter the isthmus and make it the scene of a dynamic flow of goods and people. The railway which runs alongside the ancient Roman bridge, the large Santa Caterina power station, the towers for loading coal-ships, the salt production centers and the Sardamag plant, move the nucleus of the urban area to the south where a new modern productive landscape comes into being.

Similarly Portoscuso with the birth and development of the Portovesme industrial hub, saw its pre-modern landscapes, based on the fishing industry, change radically and lose its local scale dimension. The landscape of the ancient center, characterized by low volumes and the close relationship with the sea overlooking the marina, is in stark contrast with the industrial one, marked by vertical chimneys and large, industrial and energy-production volumes (first of these being the Monteponi power station) and the horizontality of the reclaimed land used to deposit red mud from the processing of bauxite.

FIGURE 6 Re-use scenario of a large archeological building

FIGURE 7 New landing scenarios on the Santa Caterina power station outdoor spaces

THE *RESIDUAL* LANDSCAPE AND THE LANDSCAPE OF ENVIRONMENTAL DEGRADATION

The territory is affected in an undifferentiated way by "fragments" of landscape with no identity that are sometimes found at the edge of the urban fabric or are sometimes abandoned spaces from previous industrial use. In addition to the deterioration of the buildings, the history of production leaves a certain form of "residual" landscape, made of mining waste, abandoned infrastructures, inert surfaces, a landscape of artificial soils, which today convey an unrepeatable and unique image. These are perceived as an obstacle, rather than as an opportunity, for urban regeneration and the establishment of new development-oriented models of sustainable tourism. The red mud of Monteponi, the mining waste in Serbariu in Carbonia and the vast coppery basin in Portovesme, contribute equally towards the perception of an artificial landscape that forms the prevalent morphological image. However, in perfect consistency with the CEP and the Regional Landscape Plan that identifies production-based landscapes as part of the landscape assets and includes the restoration of degraded landscapes among its fundamental actions, you can glimpse an irreplaceable specific identifying characteristic of this region among these leftovers of an industrial production landscape [**FIGURE 6 – 8**].

A PROJECT FOR A NEW LANDSCAPE SCENARIO IN SANT'ANTIOCO

The research program aims to intervene at this delicate phase in the reconversion of the production systems and in the development of new economic models, providing a "guidance document" for the renewal of the entire infrastructure context. As well as being necessary technical and functional elements, infrastructures are fundamentally important for the development of new scenarios and for the implementation of new landscape projects.

Sant'Antioco appeared the place that most expresses the methods of analysis and the guidelines for the project undertaken by the Studio, due to the complexity of the issues and prospects of integrating central functions in the "inland sea" system. In brief, the study expressed the following guidelines for landscape redevelopment:

· The historic landscape with small-scale fishing and scattered forms of accommodation that restores that intimate and specialized relationship with the *inland sea*, through the reuse of numerous small landing places on the lagoon shore, thereby preserving their historic character.
· The linear landscape along the shore of the lagoon between the historic center and the area of "the ports" is an unfinished place where the town can recover its relationship with the sea through a uniform linear space for tourist
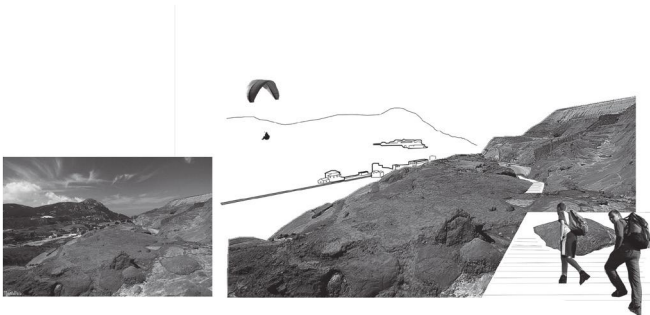
FIGURE 8 New pathways on the Monteponi red muds

FIGURE 9 A new lagoon landscape in Sant'Antioco

accommodation and for leisure and a series of lightweight jetties on the water for "small" pleasure craft.

- The new landscape of the "town on the water" and the upgrading of the industrial port with facilities for large yachts and boat-yards, together with the provision of business and hospitality infrastructures in the "empty green space" of the Sardamag plant, is recognized within a process for the region that sees this place as a center of receptivity from the inland sea of Sulcis. Among the design solutions proposed to get over the channel, the most favored proposal is that of a suspended line, a multi-functional bridge that becomes a distinguishing infrastructure that emphasizes the iconemic character of the isthmus **[FIGURE 9].**

ACKNOWLEDGMENTS

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COLLABORATIVE ENGAGEMENT FOR THE FUTURE OF A WATER LANDSCAPE

NILGÜL KARADENIZ
Ankara University, Faculty of Agriculture Department of Landscape Architecture Turkey
nkaradeniz@ankara.edu.tr

Nilgül Karadeniz is a professor of Landscape Architecture in the Faculty of Agriculture of Ankara University, Turkey. For fifteen years she has been teaching and researching within the field of landscape architecture and has been involved in landscape planning projects. Recently she has focused on participatory planning processes and has been currently directing a research project related to collaborative landscape planning. She was General Secretary of ECLAS in 2006–2009 and Vice President of ECLAS in 2009–2012. Since 2004 she has been a member of Steering Committee of LE:NOTRE Project.

EMEL BAYLAN
Yüzüncü Yıl University, Faculty of Agriculture, Department of Landscape Architecture, Turkey
emelbaylan@yyu.edu.tr

Emel Baylan graduated from Ankara University, Graduate School of Natural and Applied Sciences. Research interests include landscape planning, participatory approaches, and environmental physchology. She was involved in the TUBITAK Project on "Water Resources Management and Definition of Landscape Quality Objectives within the Scope of Collaborative Landscape Planning: Karasu River (Upper-Euphrates Basin-Erzincan) Case between 2011–2013."

NILGUN GORER TAMER
Gazi University, Faculty of Architecture, Department of City and Regional Planning, Turkey
nilgungorertamer@gmail.com

Nulgun Gorer Tamer is associate professor of Urban Planning in the Faculty of Architecture of Gazi University, Turkey. For fifteen years she has been teaching and researching within the field of urban planning and design. Recently she has focused on urban infrastructure and urban water planning issues. She was one of the researchers of TUBITAK Project on "Water Resources Management and Definition of Landscape Quality Objectives within the Scope of Collaborative Landscape Planning: Karasu River (Upper-Euphrates Basin-Erzincan) Case between 2011–2013."

NIHAN YENILMEZ ARPA
Ministry of Forestry and Water Affairs, General Directorate of Nature Conservation and National Parks, Turkey

MELIKE KUS
PhD Candidate in Earth System Sciences
melikekus@gmail.com

AYDAN OZKIL
MSc. Candidate in Earth System Sciences
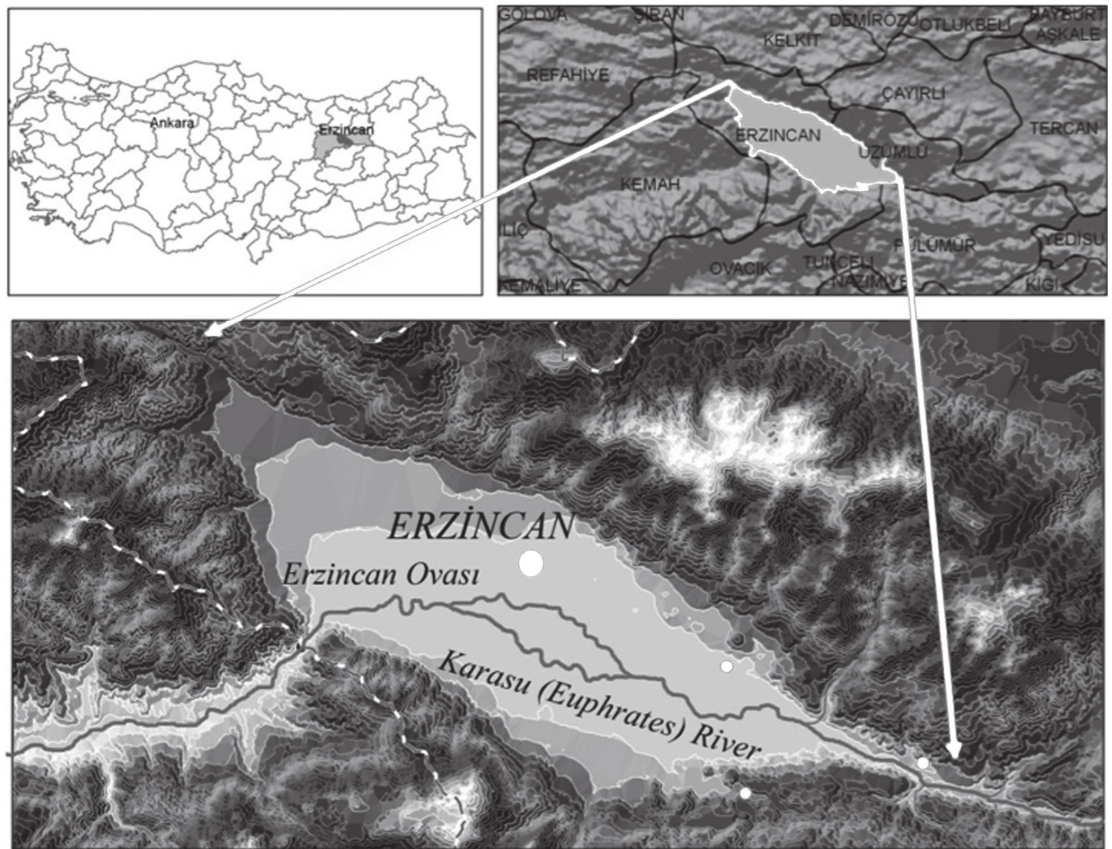*aydanozkil@gmail.com*

FIGURE 1 Location of the research area

INTRODUCTION

Water is among the most challenging natural resources in terms of various demands from various stakeholders with rights on this resource and connected landscape (Leach and Pelkey 2001; Imperial 2005). Water resources often represent different stakeholders and have conflicting demands over water. To overcome the conflicts in a participatory process, and encourage and strengthen the ownership feeling among stakeholders, collaborative approaches and processes have promising potentials for effective public involvement during landscape planning (Chrislip and Larson 1994; Healey 2003; Innes and Booher 2010). In this process developing a shared understanding of water functions, and reconciling the diverse interests and expectations of multiple stakeholders at the landscape level in a participatory approach, is needed to resolve conflicts over water landscapes. Recently, rivers are the main subject of water conflicts among stakeholders from local to national scale in Turkey. Conflicts on rivers and on the connected landscapes in the country emerge particularly from the traditional top-down natural resource management approach and its implementations,

maximum use oriented visions and competing interests over water resources and landscapes. On the other hand, the central government has the main power on managing the water resources in the country and it makes the management problems more complex. These factors result in overlooking the rights and needs of locals on water and, the ecological and societal importance and values of water resources and related landscape qualities are some of the challenging issues of water management facing Turkey in these days. Additional to complicated ownership characteristics and relations, complex ecological structure and processes shaping the river landscapes makes the management of these landscapes more challenging. One of the rivers facing threats of these complexities and challenging issues in the country is Karasu River.

THE LOCATION AND CHARACTERISTICS OF THE RESEARCH AREA

Karasu River is one of the major branches of Euphrates that shapes the life and landscape in both Turkey and Middle East Countries since the beginning of human civilization. Karasu lies in the west of the two major sources of the Euphrates in North-Eastern Anatolia, and is one of the main components shaping the landscape character in the Upper Euphrates Basin and the Erzincan Plain, while dividing the
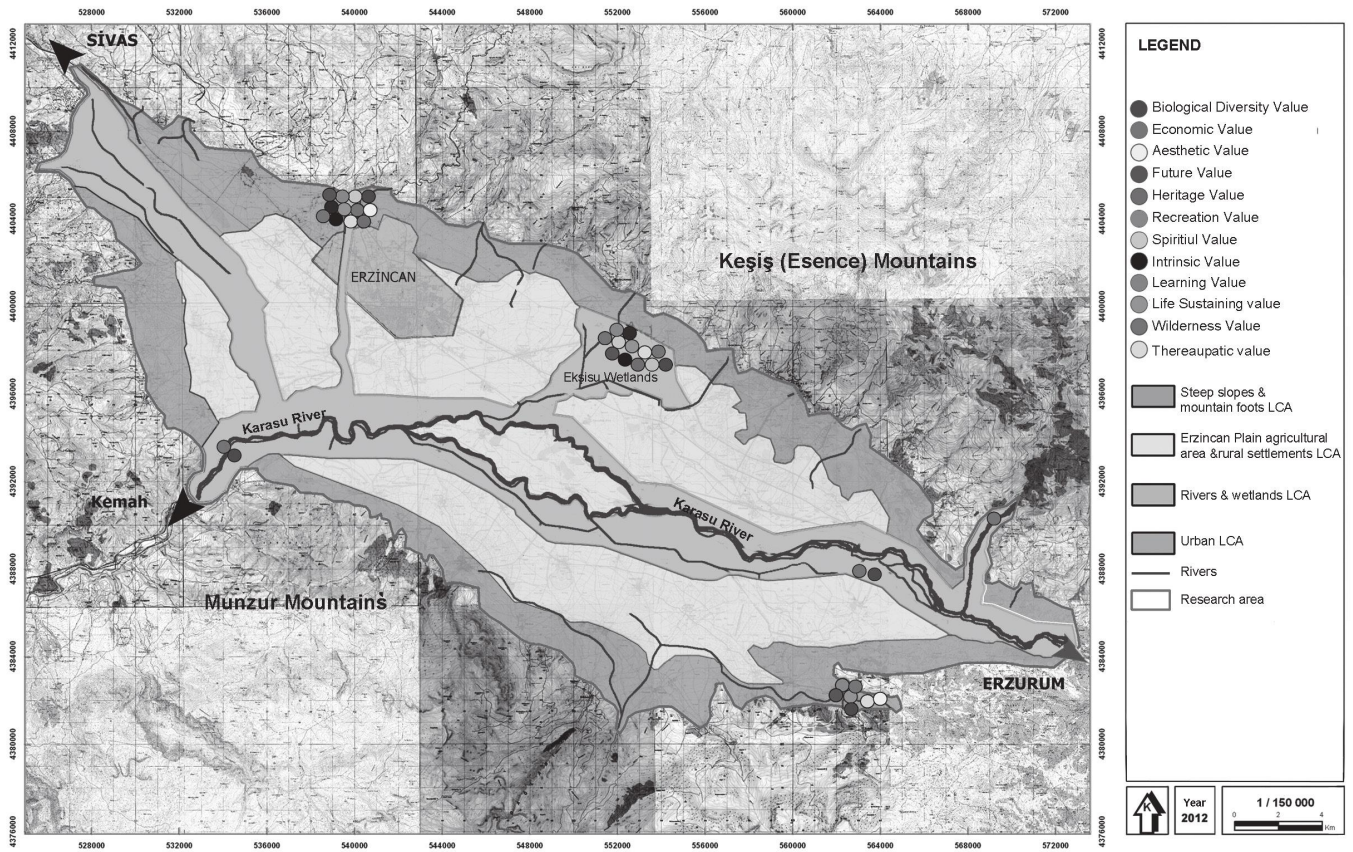
FIGURE 2 Hot spot areas and priority landscape values (Baylan 2012)

plain into two [**FIGURE 1**]. The river rises in Erzurum Province, and then flows west through Erzincan Province, and receiving various tributaries before flowing into the Keban Dam Lake in the southeast of the Euphrates.

Karasu River, also known as "Euphrates" by locals, is the key driver component of life and landscape in Erzincan Plain for its agricultural irrigation, energy, and water sports purposes. It is the main factor supporting the agricultural pattern and agricultural life.

Sitting on the crossroads of a high mountainous area up to 3,500 meters, first degree-seismic zone, and continental climate with micro-climatic features, Irano-Turanian phytogeographic region, wetlands, and diverse cultural features dating back to early Bronze Age and less-developed rural economy and infrastructure in various means, study area has unique and complex landscape characteristics.

According to the expectations on rivers from national to local scale and the importance of water for various human demands, there have been critical (vital) and conflicting interferences by local managers, entrepreneurs especially from energy and mining sectors, on Karasu River which affect the natural processes of the river and related landscape features. Previous and planned projects in different sectors, needs and rights of locals on Karasu River and ecological sustainability of the landscape that depends on the river request a

new approach for water management as well as description the context of the ownership of the water landscape. In this framework, this paper attempts to display the shaping factors and way of collaborative engagement to resolve the conflicts over water resources and connected landscapes for the future of water landscapes on the case of Karasu River and its near surroundings.

WHO OWNS THE KARASU RIVER LANDSCAPE?

Because of the complexity of the landscape, it is not very easy to answer this question in the area.

The presence of the island, which has a unique character, created by Karasu River, dominance of Karasu river in shaping the landscape, existence of wetlands, wide range of floristic character, and its appeal, differentiated agricultural pattern and product diversity due to fertile soil and appropriate climatic conditions, original rural and urban settlement patterns spread over the Erzincan Plain, existence of nature conservation areas leads to formation of various and very different sectoral stakeholder groups, who owns the landscape. These sectors shape the landscape by working in their areas of responsibility regarding conservation, utilization, management, and monitoring of the landscape values at central and local levels. Due to these implementations, which are often carried out in isolation from each other,
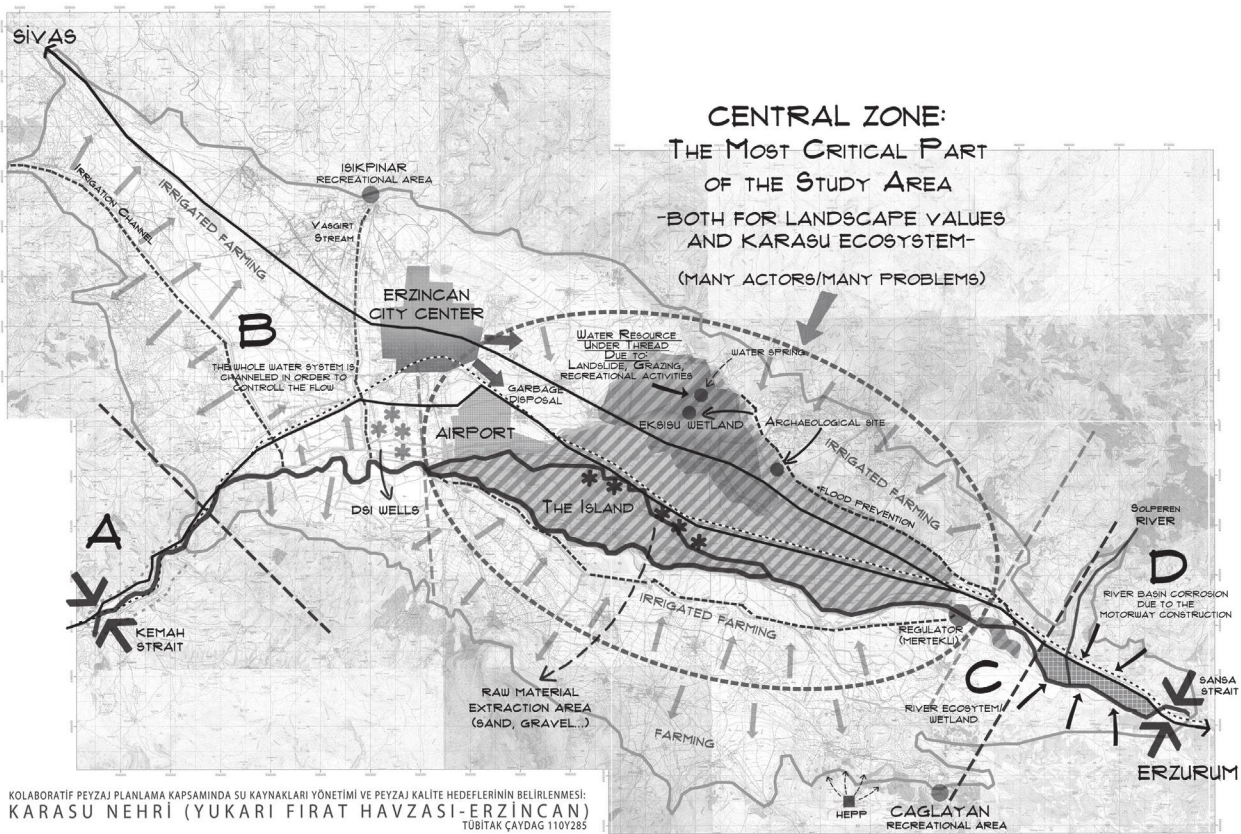
FIGURE 3 Problem/conflict area analysis

ownership of the landscape becomes a more inextricable process. All these complicated processes make it clear that ownership analysis in landscape studies is also a complex process.

METHOD
In order to give an answer to "who owns the landscape" question, stakeholder analysis, problem analysis, landscape values analysis, and conflict area analyses have been carried out.

Stakeholder Analysis Different groups directly or indirectly related to the water resources and the plans, projects and implementations on these water resources are studied and thirty-seven stakeholders were identified in the area.

Analysis of main and common problems in the area
The analysis has been carried out to determine problems, conflicts and shortcomings affecting viability of the landscape and the management of Karasu River and its tributaries within the context of cause-and-effect relationship.
In this context, working groups shared the problems they defined with the other groups with meta-plan technique. Defined problems were turned into a problem tree according to cause-effect relationship [**FIGURE 4**].
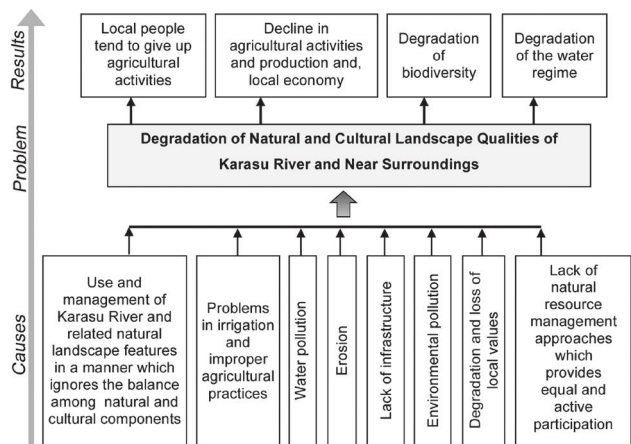
FIGURE 4 Problem tree for Karasu River landscape

Mapping and analyzing landscape values The methods used in Gregory Brown and Christopher Raymond (2007), Lilian Alessa et al. (2008), and Xuan Zhu et al. (2010) were used for mapping and analyzing twelve different landscape values. Mapping of landscape values in the study area has been done based on the scoring done by the local stakeholders on 1/150.000 scale topographic maps [**FIGURE 2**].
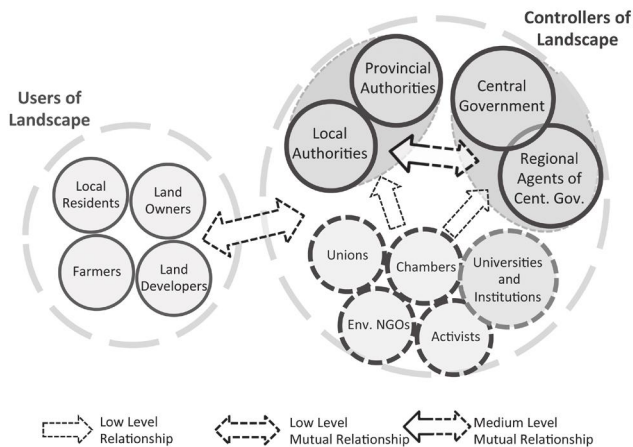
FIGURE 5 The owners of the Karasu water landscape and their existing engagements
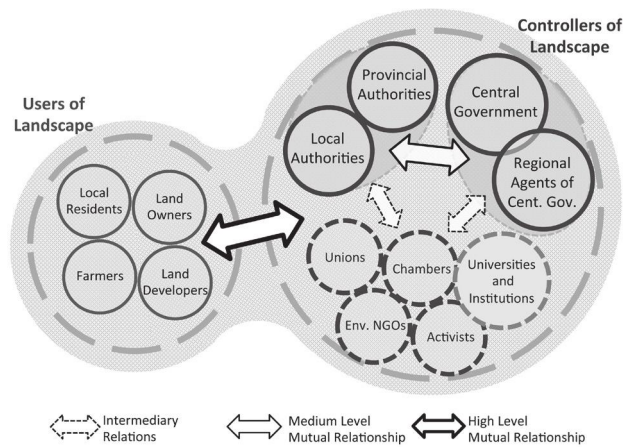

FIGURE 6 Proposed collaborative engagement for the owners of Karasu water landscape

Problem/conflict area analysis Problem/conflict areas are determined in the study area. Karasu River landscape was defined under 4 sub-areas within the borders of the study area [**FIGURE 3**]:

- Region A and C, with different features and protected natural characteristic;
- Region B and D, where there are significant changes on the water system due to activities with different nature;
- Central Zone, which covers the most characteristic part of the landscape, the "island" and its surroundings, of the study area. The region includes urbanization, agricultural, tourism activities, and irrigation infrastructure. This part, in the middle of other regions, has turned into the most sensitive ecosystem area due to the activities it includes.

FINDINGS

Meetings and interviews done with the stakeholders in Karasu case showed that there are innumerable and very different stakeholders for a water landscape. As a result of the stakeholder analysis, two main groups called "users" and "controllers" were described.

The stakeholders utilizing the "landscape" directly are called users, while the ones who own the intervention tools (legal and administrative) to the "landscape" are called controllers.

In this case, at a first glance it seems that the study area has multiple-owners; however when the "gaps" among the stakeholders are evaluated it is revealed that the area is "ownerless" [**FIGURE 5**].

As a result, the discussion for this specific study area has turned from "who owns the landscape" to "how do they own." In this context, relations of the interest groups with the area are evaluated. It is found out that the interest groups have enclosed mechanism in terms of ownership of the area and the landscape values, and thus the mechanisms have problems. This gap between the users and controllers is one of the most important considerations. Insufficiencies in information flow between institutions, lack of local participation in the preparation of projects, dominance of the central government in control of the area and lack of a common vision for the area are the main factors creating this gap. Additionally, lack of a mechanism-creating dialogue between the interest groups exacerbates the impact of this gap.

As a result, it is widely accepted that the stronger interest group owns the landscape and the landscape is shaped by this group, which is almost the central government. Although local and central administrations are active in all the decision-making processes, they work in a fractured, multi-agent, and disconnected manner.

RESULTS AND DISCUSSION

When the relationships between the stakeholders are examined, it is discovered that expectations, demands and interests of each group is different and the interests often conflict with each other. This in turn raises the question of management in the ownership of the landscape.

The most important components of collaborative approaches and processes, which brings different perspectives and parties together in shared thinking, shared problem solving and shared decision making processes and in which the ways of sharing the power and the responsibilities among the stakeholders are: active stakeholder participation, negotiation and consensus. Main participants of such process in this context are the local stakeholders. The model of collaboration is associated with the participation methods to be used in this process and the environments, as well as the results expected in the collaboration process and necessities (Selin and Chavez 1995; Koontz 2003; Engel and Korf 2005; Baylan 2012). The management model should be planned as a tool to define the ownership if the management model is going to be discussed on the basis of ownership **[FIGURE 6]**.

The dispersed structure dissolves the ownership status if coming together for a common purpose is not possible. An ownership structure can be realized when a specific management model is developed, planned, and implemented. Management is the main tool indicating and determining the owner of the landscape and how it is owned. A collaborative approach is proposed to manage the owners of the landscape/usage patterns/preferences. Collaborative engagement is developed in this context.

In this study, collaborative approach is discussed as an answer to the question "how to own a water landscape" and the requirement of developing a management model, in which the parties/stakeholders have equal responsibility, is indicated. The groups should protect the landscape by defining the roles required by the mission and vision, sharing the tasks and responsibilities in order to achieve the common vision and mission determined by them.

In this context, a common discussion/sharing platform is developed for the future of Karasu with the interest groups in the study area and ultimately a vision is developed with a common contribution.

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ENERGY LANDSCAPES

ENERGY-LANDSCAPE NEXUS: ADVANCING A CONCEPTUAL FRAMEWORK FOR THE DESIGN OF SUSTAINABLE ENERGY LANDSCAPES

SVEN STREMKE

Wageningen University Landscape Architecture, the Netherlands
sven.stremke@wur.nl

Dr. Sven Stremke is Assistant Professor of Landscape Architecture at Wageningen University in the Netherlands. His research focuses on sustainable landscapes with special attention to renewable energy. Recently, Sven Stremke and Renée de Waal launched the NRGlab—a laboratory devoted to the research and design of sustainable energy landscapes.

INTRODUCTION

For some time now, the concept of "energy landscape" is discussed in academia while more and more practising landscape architects contribute to the siting, designing, and assessment of renewable energy technologies (see Stremke et al. 2012). Yet, there remains some ambiguity what exactly is meant with "energy landscape" and, most importantly, how to shape landscapes that do not merely accommodate renewable energy technologies but that can be considered sustainable. The latter knowledge gap has been described as following: "While the desirability of renewable energy is not in doubt, comprehensive assessments of its sustainability … are, at present, not generally carried out" (Blaschke et al. 2013, 2).

Prominent examples of the "clash between local rights to landscape and the more global logic of progress towards a low carbon economy" (van der Horst and Vermeylen 2011, 467) are the growing opposition against wind turbines and solar parks. Energy transition is indeed challenged by socio-economic forces but also, unfortunately, characterized by a lack of scrutiny when it comes to the notion of

sustainability. German policy makers, for example, recently concluded that solar parks on farmland compete with food production, can therefore not be considered sustainable and should consequently receive lower feed-in tariffs. Could we not have anticipated this adverse effect of renewable energy provision on other ecosystem services before, based on solid science and experiences elsewhere?

This paper is based on literature research, questionnaires, expert interviews and findings from research and design projects in the Netherlands. The energy-landscape discourse, however, is not limited to the Netherlands; **TABLE 1** presents a selection of projects that deal with sustainable energy transition. The main objective of this paper is to advance a conceptual framework for the planning and design of sustainable energy landscapes; an attempt to advance the energy-landscape discourse beyond the siting, designing, and assessment of renewable energy technology (RET).

FIGURE 1 Evolution of the physical energy landscape through time

Country	Authors
Austria	Blaschke et al. (2013) Wächter et al. (2012) Stoeglehner & Narodoslawsky (2012)
Canada	Schroth et al. (2012); Thün and Velikov (2012)
China	Bunschoten (2012)
Denmark	Jørgensen (1997 and 2007)
Germany	Schöbel et al. (2012)
Netherlands	Van den Dobbelsteen et al. (2012); Stremke et al. (2012); Gelinck et al. (2013)
Switzerland	Grêt-Regamey and Wissen-Hayek (2012)
United Kingdom	Burgess et al. (2012); Coleby et al. (2012)
United States	Thün and Velikov (2012); Lehrman et al. (2012)

TABLE 1 Selection of energy-conscious planning and design projects that have been published

EVOLUTION OF ENERGY LANDSCAPES

Energy landscapes are not a new phenomenon; humans have created many different energy landscapes. In the context of this paper, it is beneficial to distinguish between the *physical energy landscape* on the one hand and the *concept of energy landscape* on the other hand. Many have studied the evolution of the physical energy landscape over time. Martin J. Pasqualetti (2012), one of the key scholars in the energy-landscape discourse, has described four energy landscapes **[FIGURE 1]**. Clearly, energy and landscape have been inseparable throughout human history.

The second dimension discussed here is the concept of energy landscape; an abstract idea that presents not only the object of philosophical discussion but shapes the way we perceive the physical environment at large. The landscape not only presents the core interest of landscape architects but also represent a complex system at intermediate spatio-temporal scale. **TABLE 2** presents a number of varieties of the energy landscape concept.

Concept	Author(s) and year	Energy	Renewables	Demand reduction	People	Planet	Economy
Wind-energy landscapes	Moeller, 2006	x	x	-	x	-	-
Landscapes of energies	Nadai and Van der Horst, 2010	x	x	-	x	(x)	-
Landscapes of carbon neutrality	Selman, 2010	x	x	x	x	-	(x)
Sustainable energy landscapes	Stremke, 2010	x	x	x	x	x	(x)
Renewable energy landscapes	Van der Horst and Vermeylen, 2011	x	x	-	x	-	(x)
Third generation energy landscapes	Noorman and de Roo, 2011	x	x	(x)	(x)	-	(x)
Energy landscape	Blaschke et al. 2012	x	x	-	x	x	x
Alternative energy landscapes	Jørgensen, 2012	x	x	(x)	-	x	-
Energy landscapes of the sustainable economy	Pasqualetti, 2012	x	x	-	x	x	-
Energyscape	Howard et a. 2013	x	x	x	x	x	-

TABLE 2 Multiple facets of the concept of energy landscape and associated aspects. Aspects that are discussed in depth by the author(s) are marked "x." If they acknowledge an aspect it is marked "(x)" and "–" if that is not the case.

Pasqualetti (2012) suggest that each energy landscape, in spite of dominant energy sources, can be subdivided into the following three layers: (1) Direct layer whose costs are internalized: for example, mining scars. (2) Indirect layer whose costs are commonly externalized: for example, subsidence depression. (3) Mitigation layer that results from the attempts to mitigate effects: for example, recreational lakes. What is most interesting in this qualification is the use of the term "layer" with regard to the energy landscape.

I like to argue that the term "layer" is most appropriate to describe the phenomenon of physical energy landscape in the human environment. Energy landscapes, in other words, are not necessarily distinct spatially bound landscapes such as the coal mining landscapes in Lusatia, Germany. In most cases, the energy landscape is nothing but one of the many layers of complex, multi-faceted, and heterogeneous landscapes.

Without elaborating much on the different layer theories, it is important to remember that energy landscape not necessarily represent a distinct spatial entity but can be conceptualized as layer or subsystem of the larger physical environment. Focusing on a particular subsystem within a larger system—in our case energy landscape—is a common strategy in systems sciences. Thomas Blaschke et al. affirm "that the concept of an energy landscape may be useful in dealing with the challenges regarding renewable energy production that face society in the 21st century" (2013, 7).

Let us, for the time being, set aside the discussion on semantics and see if the ecosystem services frameworks can assist in advancing the planning and design of sustainable energy landscapes (SEL).

ECOSYSTEM SERVICES FRAMEWORK

Dan van der Horst and Saskia Vermeylen suggest that "… landscape-energy conflicts can be easily recognized as conflicts between cultural ecosystem services (the amenity of the landscape), provisioning ecosystem services (yielding energy) and regulating ecosystem services (maintaining the carbon cycle)" (2011, 461). Alastor M. Coleby et al. go even further, arguing that incorporating ecosystem services in the decision making process "… could help achieve sustainability by identifying the best options within an area,

rather than concentrating on the negative effects of selected proposed projects" (2012, 369). Given these prospects, we will now briefly visit the ecosystem services (ES) framework in order to identify qualitative criteria for the planning and design of SEL.

Most ES scholars have found it useful to categorize the services and goods that humans receive from ecosystems into functional groups. Three ES functions are directly related to energy landscapes: (1) production of biomass as energy source, ecosystems as carrier for (2) energy-conversion technologies and (3) transportation infrastructure [TABLE 3]. The generation of electricity and/or heat by means of hydropower, wind, solar, and geothermal energy is usually excluded as this is not directly linked with ecosystems. However, other ecosystem functions can be affected by the provision of RE. That is why the ES framework has been employed in several projects to conduct trade-off analyses between ES and RE [TABLE 4]. FIGURE 2 illustrates the virtual outcomes of a quantitative comparison for a set of seven functions, both for the present situation and for a proposed scenario with increased provision of RE.

Literature reveals that ES scientists put forward multiple sets of services and that the debate on some of the fundamental building blocks of ES theory is still on going. Yet, the ES framework provides useful structure and considerations for sustainable design (for example, minimize competition between provision of RE and food). Almost all RET can be associated with ES (directly via biomass or indirectly as carrier function). In turn, many ES are affected by RET. However, it also became clear that not all aspects of sustainability can be expressed (and addressed) by means of ES. Access to affordable energy—a key driver for sustainable energy transition—cannot be expressed by means of ES, and more examples exist. In both planning cases presented in TABLE 4, ES are weighted against each other but not with other criteria for sustainable development. What could these be, and more importantly, how can we structure the emerging conceptual framework for sustainable energy landscapes?

Processes and components	Goods and services (examples)
Regulation functions	
Climate regulation	Maintenance of a favourable climate for, for example, human habitation
Water regulation	Drainage and natural irrigation
Waste treatment	Pollution control/detoxification by vegetation and biota
Habitat functions	
Refugium function	Suitable living space for wild plants and animals
Nursery function	Suitable reproduction-habitat
Production functions	
Food	Hunting, gathering of fish, game, fruits etc.
Raw materials*	Biomass as fuel (via photosynthesis)
Medicinal resources	Natural biota for drugs and pharmaceuticals
Information functions, often referred to as cultural services (MEA 2004)	
Aesthetic information	Enjoyment of scenery by, for example, attractive landscape features
Cultural and artistic information	Use of a variety of natural features with cultural and artistic value
Spiritual and historic information	Use of a variety of natural features for religious or historic purposes
Carrier functions	
Mining	Facilities for the exploitation of minerals, oil, gold, coal, gas, crude oil etc.
Energy-conversion facilities*	Facilities as for the conversion of energy such as solar, wind and water energy
Transportation*	Infrastructure for transport/transmission including energy transport (and storage)

TABLE 3 Overview of selected ecosystem functions, goods and services (based on De Groot 2006). Functions with "*" are directly related to the discussion on energy landscapes.

	Entlebuch (Switzerland)	Marston Vale (England)
Publication	Grêt-Regamey and Wissen-Hayek (2013)	Burgess et al. (2012)
Technical criteria Example wind	300m buffer settlements, Slope from 0° to 20°, Min. wind speed 4.5 m/s, Street categories min. class 3, Exclusion water bodies, woodlands and nature reserves	800m buffer settlements, 500m buffer commercial areas and woodland Slope from 0° to 10°, Min. spacing 5x rotor diameter Exclusion water bodies
RE sources included in trade-off analysis	Wind energy Solar energy Woody biomass Moist biomass	Wind energy Biomass (energy crops)*
ES included in trade-off analysis	Agriculture production Habitat quality Landscape aesthetics	Food humans Animal feed Wood (raw material)

TABLE 4 Comparison of two case studies on integration of ES and RE
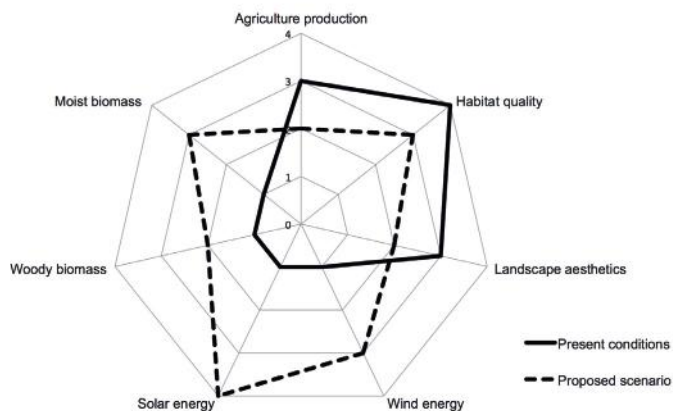
FIGURE 2 Schematic representation outcome trade-off analysis between different ES and RE

ADVANCING A CONCEPTUAL FRAMEWORK

Kenneth R. Olwig (2011) depicts the mitigation of climate change as a global issue that potentially compromises quality of landscapes at the local scale. Van der Horst and Vermeylen (2011) discuss this challenge while exploring a number of positive examples of what they refer to as "renewable energy landscape." Energy landscapes, without a doubt, hold the potential solving the global issue while maintaining or even improving the qualities at the local scale. In order to do so, one would have to employ renewable energy sources in a sustainable way. In this context it is critical to remember that the terms *renewable* and *sustainable* are indeed related but not synonymous: Sustainable energy, by definition, is always renewable but renewable energy is not necessarily sustainable as it is envisioned, for example, in the Brundtland definition (WCED 1987). In the past, sustainable energy landscape has been defined as "a physical environment that can evolve on the basis of locally available renewable energy sources without compromising landscape quality, biodiversity, food production and other life-supporting ecosystem services"(Stremke and Van den Dobbelsteen 2012, 4). To the author, the notion of *energy landscapes* has much in common with the definition of others. David C. Howard et al. (2013), for example, distinguish

between form and function. Form refers to spatiotemporal characteristics such as spatial extent and nature of the boundary. Function, on the contrary, refers to the purpose of a system, in this case particular forms of energy provision and demand reduction. The adjective *sustainable*, finally, can best be referred to as descriptor, a qualitative component that suggests *how* to realize certain functions within a dynamic physical form.
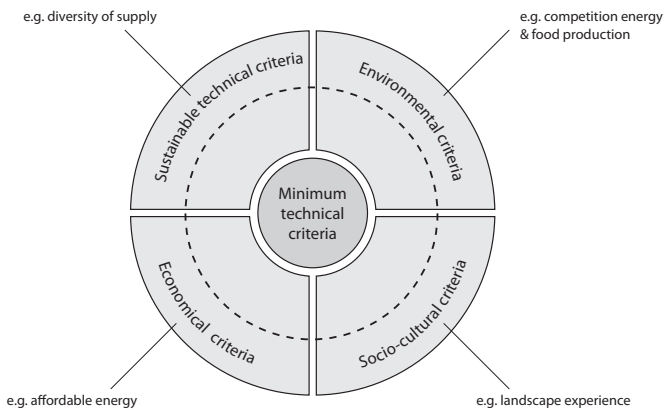

FIGURE 3 Schematic representation of relations between groups of criteria (four domains) and the project-specific definition of sustainability (dashed circle).

Departing from ES theory, we have explored additional criteria to advance a comprehensive conceptual framework for SEL. These criteria have been arranged in four main groups, namely: sustainable technical, environmental, socio-cultural, and economical criteria [**FIGURE 3**]. A number of minimum technical criteria always apply (small circle in the centre of the diagram). The same is true for a selection of "core" criteria from each of the four domains. Note that these criteria are located within the dashed circle. Yet, there is room for negotiations about whether certain additional (non-core) criteria are considered relevant for the project at stake. Options A is to assign particular criteria as "core criteria" for the development of a sustainable energy landscape (move

criterion inside dashed circle). Option B is to adopt the general definition of what is considered sustainable in a specific project (increase the size of the circle). For each project, criteria have to be selected, further specified and prioritized by the stakeholders and experts involved. [**TABLE 5**], finally, provides an overview of criteria for decision-making. Please note that due to the limited space available for this paper, the table only lists a selection of criteria.

Criterion		Principle
1. Technical criteria		
1.1	Safety and health issues	Consider safety and health regulations to reduce risk and minimize impacts for humans
1.2	Demand reduction	Reduce energy demand (and need for provision of RE) by means of energy-conscious planning and design
1.3	Renewable energy sources	Make us of energy sources that can be replenished and do not deplete
…	*total of 9 criteria*	
2. Environmental criteria		
2.1	Reversibility	Precautionary principle of sustainable development: All actions and interventions must be reversible
2.2	Emission reduction/carbon footprint	RE should contribute to the reduction of GHG emissions and have a smaller carbon footprint than fossil fuels
2.3	Hazardous materials/ pollution	RET should not make use of harmful materials and minimize pollution
…	*total of 10 criteria*	
3. Socio-cultural criteria		
3.1	Aesthetic values/landscape experience*	Maintain (or improve) 'innovatory' aesthetic value that is not limited to visual landscape experience^
3.2	Sensual experiences	Maintain (or improve) positive sensual experience of landscapes
3.3	Sense of place and belonging*	Maintain (or improve) sense of place and enable belonging to community
…	*total of 11 criteria*	
4. Economical criteria		
4.1	Affordable energy	Ensure inhabitants access to affordable energy also in the future
4.2	Land use competition	Minimize land use competition due to renewable energy provision
4.3	Distribution of benefits and drawbacks (energy equity)	Enable fair distribution of benefits and drawbacks and between all involved
…	*total of 7 criteria*	

^ The criterion of aesthetic values/landscape quality is, by definition, of core interests to landscape architects and other environmental designers. Due to constraints of this conference paper, I can only refer to some key authors: Bourdieu (1984), Koh (1987), Thayer (1994), Wolsink (1994), Thompson (1997), Belanger (2009), Barrett et al. (2009), and Selman (2010).

TABLE 5 List of selected sustainability criteria for sustainable energy landscapes. Criteria marked with "*" are linked to the ES framework.

DISCUSSION AND CONCLUSION

Coleby et al. stress that a "successful implementation of an ecosystem services approach would also require a greater understanding of the societal preferences for the full range

of ecosystem services at a landscape scale, as well as the trade-offs and synergies between uses of specific services" (2012, 369). The same is true for the here presented sustainability criteria for energy landscapes. They are normative by nature and need to be selected/prioritized by as many stakeholders as possible together with experts; a process that can be facilitated by landscape architects, for instance by conducting questionnaires and composing "quality guides" for the development of a sustainable energy landscapes in particular territories. Quality guides have been created in the past, yet for other purposes (for example, Okra 2011). Next, indicators and assessment tools have to be developed (if not already existing) though this is not necessarily a task for landscape architects.

In difference with other publications, the conceptual framework put forward in this paper combines ecological and technical criteria with other criteria that are not connected to ecosystems and yet critical for the development of SEL. It is rather obvious that the selection of relevant criteria not only varies from place to place but may also do so in time. What might be considered sustainable now on the basis of current knowledge, could potentially be questioned in the future. What matters in this regard is that one prevents irreversible interventions. As long as interventions can be reversed, the possible lack of knowledge will have little consequences. Of course, this is no satisfactory answer to a researcher but can possibly help to prevent inertia in the light of uncertainty. To this moment, it appears difficult to conceive and realize a 100% sustainable energy landscape as the concept of *sustainability* itself is being debated and alternative terms put forward by many. Yet, the challenge is clearer than ever and we will have to explore all possible pathways to reach the ultimate goal: a carbon-free future. The conceptual framework presented here has assisted my colleagues and students and hopefully will also be of value to others.

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SOCIO-ENVIRONMENTAL CHARACTER ASSESSMENT OF LANDSCAPES IN SMALL-SCALE HYDROPOWER OBJECTS IN LATVIA

LILITA LAZDANE
*Latvia University of Agriculture,
Landscape Architecture, Latvia*
l.lilita@inbox.lv

Lilita Lazdane is a doctoral degree candidate in Landscape Architecture at the Latvia University of Agriculture; holds a Master of Architecture in Landscape Architecture and a Bachelor in Landscape Architecture and Planning from the Latvia University of Agriculture. Since 2005, she runs a professional practice in landscape architecture, territorial planning, and research. She is a member of Latvia Association of Landscape Architecture (Latvijas ainavu arhitekturas biedriba), and since 2013, has served on its board of administration. She is also a member of the IFLA (International Federation of Landscape Architects) Europe. Her research projects have been in the field of watersides, historical, cultural, and industrial landscapes. Her publications have been made in the proceedings of various conferences and in scientific journals.

assessment matrix / local scale

INTRODUCTION

Since ancient times, watermills have been regarded as one of the most fundamental essentials of life. Quite often, the sites of country watermills have been described as places of special beauty (Teivens 1985). In the European Landscape Convention, the landscape is defined as "area, as perceived by people …" (Council of Europe 2000). What this means is that landscape has to be perceived, and for this, the place needs to be visited in order to be perceived. For the purpose of this research study, a socio-environmental aspect is closely linked to the term "public spaces." Through several actions, such as visual involvement and the attachment of values, people are directly involved in public spaces, and public spaces are publically perceived, valued, and controlled landscapes (Francis 1989). Thus, the tendencies to analyze different landscape qualities are arising. Moreover, the context of research, according to globalization theory, is becoming more important (Reenberg and Primdahl 2009). It is precisely now when the development of new technologies and materials are increasing (Antrop 2005). Naturally, these tendencies would have impacts on local and global social activities and political decisions.
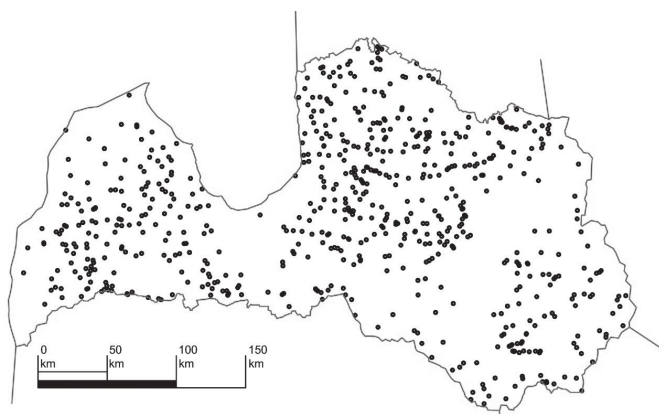
FIGURE 1 The location of small-scale hydropower objects in period from 1920s to 2013.

FIGURE 2 The map of Latvia and the territories chosen for this research study (construction by author).

Until now, only a few research studies has been conducted in relation to the territories of the Latvian landscapes of water-mills or small-scale HPP. Some historical investigations of watermills or small-scale HPP in Latvia have been completed by Arno Teivens (1985), Raitis and Virsnieks (1944), Kārlis Silke (2008), Magelis (1994). An author of this research study has conducted investigations on the history of these territories (Lazdane 2011), on public sentiments about these territories (Lazdane 2012), the aspect of aesthetics (Lazdane 2013a) and ecology (Lazdane 2013b), but from several other aspects, the situation of landscape quality until now is not still clear. Thus, the socio-environmental character assessment in researched landscapes will be interpreted. Furthermore, the aim of this research project is to detect the existing situation in landscapes of watermills and small-scale hydroelectric power plants in Latvia and summarize common tendencies in socio-environmental characters of landscape quality.

MATERIALS AND METHODS

The territories for this survey are the watermill territories, which were marked on the maps from the nineteen-twenties (Ģeodēzijas topogrāfijas daļa 1920–1937), and the small-scale HPP, marked on a map from the book by Association of Small-Scale Hydroenergy (Siļķe 2008), and on the maps from the research done by Magelis (1994). Latgale, Vidzeme, and Kurzeme regional uplands areas have high density of developed territories for watermills and small-scale HPP [FIGURE 1]. This research study took place between 2010 and 2012. The landscape quality assessment by aspect of public use is done by an expert (the author of this research study) according to her professional practice and knowledge based on literature review studies in this field (e. g.,Melluma and Leinarte 1992; Unwin 1975; Vorel 2006; Gaujas nacionālais parks
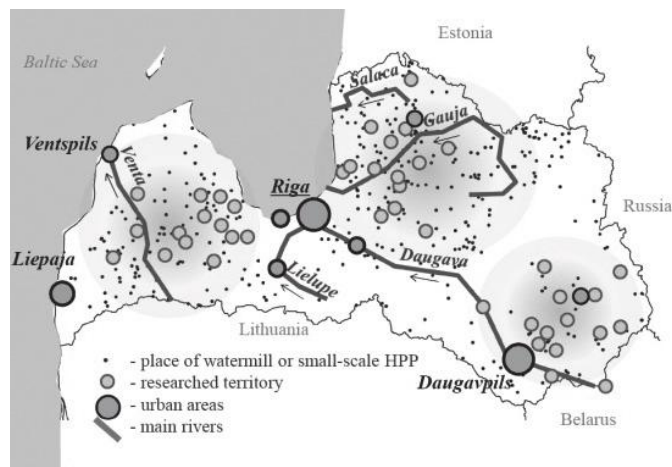
2005; Zigmunde D. 2010, Nodibinājums Vidzemes attīstības aģentūra 2007; URBEM 2003; Taylor, Zube and Sell 1987; Lynch 1990). The matrix with identifying features (theoretically pre-prepared) of landscape was developed by definition of marks and expressions, and 18 identifying features were noted [TABLE 1]. Then the territories for the research were randomly selected, but with the specific criterion of location in all three upland areas, totaling fourteen in each, and by the location (rural, suburb, or urban), by landscape construction etc. [FIGURE 2]. The existence of each expression by defined criteria was marked in the matrix, and afterwards, based on these results, values were calculated. After the inventory matrix was fully documented for each territory, the aggregate data have been tabulated and are shown in this paper. The percentage is used for display from the total of 100% of territories (forty-two), indicating exactly how many places where the percentage are situated define the expressions of defined identifying features which will refer on the landscape quality tendencies.

RESULTS AND DISCUSSION

For this research study, several landscapes in designated territories have been visited. The results from landscape inventory matrix are showed in TABLE 1. The individual landscape inventory for each territory is available on request, and it will be a useful material as qualitative data in each specific territory. The results show that the locations of reference signs on roads in 71% of territories do no exist (B.0.1). World Tourism Organization has held that tourism signs and symbols should express their meaning in the most universal and simple language possible, and symbols for visitor's signage, has to meet three requirements: visibility, permanence, and coherence (World Tourism Organization 2001).

Identifying Features	Expressions			
Location of reference signs on roads	No signs	Only on closest crossroad to territory	On most crossroads on the way to the territory	On all crossroads from highest to lowest level roads
B.0	B.0.1	B.0.2	B.0.3	B.0.4
Value, %	71	22	2	5
Language used in reference signs to territory	No reference signs	Only symbols	National language	National, foreign languages or/and symbols
B.1	B.1.1	B.1.2	B.1.3	B.1.4
Value, %	71	0	12	17
Audibly-used language in territory	No detected language	Foreign languages	National language	National and foreign languages
B.2	B.2.1	B.2.2	B.2.3	B.2.4
Value, %	43	9	31	17
Language used in published information in territory	No detected language	Foreign languages	National language	National and foreign languages
B.3	B.3.1	B.3.2	B.3.3	B.3.4
Value, %	43	0	55	2
Access by public transport	Impossible	Is possible, but only by bus	Is possible, but only by train	Is possible by bus, train and other transports
B.4	B.4.1	B.4.2	B.4.3	B.4.4
Value, %	36	55	2	7
Territory accessibility by public	Territory is inaccessible	Territory is accessible only by permission	Only part of territory is accessible by public	All territory is accessible by public
B.5	B.5.1	B.5.2	B.5.3	B.5.4
Value, %	5	12	43	40
Buildings accessibility by public	All buildings are inaccessible	Buildings are accessible only by permission	Part of buildings are accessible only by permission	All buildings are accessible by public
B.6	B.6.1	B.6.2	B.6.3	B.6.4
Value, %	54	26	10	10
Possibilities for car parking	None	None-existent, but possible to find	Exist, but scarcely on this territory	Exist in ample quantity
B.7	B.7.1	B.7.2	B.7.3	B.7.4
Value, %	12	45	12	31
Possibilities for bicycle parking	None	None-existent, but possible to find	Exist, but scarcely on this territory	Exist in ample quantity
B.8	B.8.1	B.8.2	B.8.3	B.8.4
Value, %	22	76	0	2
Marina possibilities	Impossible, no sufficient water surface	Could be possible, infrastructure none-existent (or unsafe for use)	Possible only in constructed ports	Possible in freely chosen riverbank or in constructed port
B.9	B.9.1	B.9.2	B.9.3	B.9.4
Value, %	14	52	5	29
Accessibility by people with invalidity	Impossible to access	Possible only by entrance part of territory	Possible on all parts of territory	Mainly possible on all territory and in buildings
B.10	B.10.1	B.10.2	B.10.3	B.10.4
Value, %	26	45	17	12
Seasonal accessibility	Only in dry, summertime climate	In any climate	-	-
B.11	B.11.1	B.11.2	-	-
Value, %	24	76	-	-
Territory safety and suitability for children's visits	Unsafe and unsuitable	Part of territory is safe and suitable	All territory is safe and suitable	-
B.12	B.12.1	B.12.2	B.12.3	-
Value, %	38	43	8	-
Public squares	Is not located	Exist in inappropriate quality	Part is in appropriate quality	Exist in appropriate quality
B.13	B.13.1	B.13.2	B.13.3	B.13.4
Value, %	47	12	24	17
Access to water surface	Access none-existent or not arranged	Access is possible only by permission	Access is possible in part of territory without permission	Access is possible in all territory to any part
B.14	B.14.1	B.14.2	B.14.3	B.14.4
Value, %	45	29	17	9
Sport equipment	None-existent	Exist in inappropriate quality	Exist in appropriate quality, but to less variety	Exist in appropriate quality and variety
B.15	B.15.1	B.15.2	B.15.3	B.15.4
Value, %	81	2	10	7
Recreational facilities	None-existent	Exist self-made equipment made by local people	Exist in some parts of territory, to a few number or less variety	Exist in proper number and variety
B.16	B.16.1	B.16.2	B.16.3	B.16.4
Value, %	36	17	26	21
Number of territory visits	None-existent	Territory is seldom visited	Territory is visited, too many people are in territory	Territory is visited, and a proper number of people are in territory
B.17	B.17.1	B.17.2	B.17.3	B.17.4
Value, %	38	43	0	19

TABLE 1 Landscape inventory matrix and the results by socio-environmental characteristic assessment (construction by author according to the literature review of Melluma and Leinarte 1992; Unwin 1975; Vorel 2006; Gaujas nacionālais parks 2005; Zigmunde D. 2010; Nodibinājums Vidzemes attīstības aģentūra 2007; URBEM 2003; Taylor, Zube, Sell 1987; Lynch 1990)

For this requirement, the researched territories have tenuous positions for attracting tourism not even at the local scale. Access is important prerequisite to realizing many other dimensions of public-space quality, and for good used space, it has to be accessible (Francis 1989; Lynch 1981). According to accessibility criteria, the landscapes in researched territories in general are mostly accessible by public 40% (B.5.4) or accessible only in part of territory 43% (B.5.3). The seasonal accessibility in any climate is possible in 76% of territories (B.11.2). The circumstances in rural and urban territories might be opposite of one another, according these criteria, because the urban development environment could be more in "control" than outdoor rural areas (Hooper 2007). Landscape is changing constantly, and it is not a static object without impact form nature or human actions on a daily basis. Each traditional landscape could

express a unique sense or spirit of the place ("genius loci") (Antrop 2000). According to previous research studies, landscapes in watermills have a significant role in local inhabitants' involvement and were in active use (Teivens 1985). Public accessibility also has important role, and a watermill territory has to have a good quality access road for product delivery and for general safety in territory not only for adults, but also for families with children who might play around in the territory and might not be very careful during their play.

CONCLUSIONS

The assessment method used for this research study—morphological matrix—portrays the several different situations in different landscapes in Latvia. The results show that a lot of improvements have to be made for qualitative public accessibility in each territory. The current situation is not well-suited and well-managed in socio-environmental aspect. The owners of territories, especially those territories which have the main aims to be for public use, need to manage the orientation signs to territory better in reference signs or in published information about the territories; have to use more languages and symbols; improve the accessibility by public or private transportation, and so on.

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A NEW ASSESSMENT METHODOLOGY FOR CULTURAL LANDSCAPES CONSTRUCTED BY THE ENERGY INDUSTRY: A CASE OF STUDY IN CENTRAL SPAIN

FRANCISCO ARQUES SOLER
Technical University of Madrid, Faculty of Architecture, Spain
francisco.arques@upm.es

Francisco Arques has a Doctor of Architecture from the Escuela Técnica Superior de Arquitectura of the Universidad Politécnica de Madrid, where he is a professor at the Department of Architectural Projects. He is researcher of the Cultural Landscape Research Group and he has been the leading researcher for several projects at GIPC on the topic of the contemporary territorial heritage.

MANUEL RODRIGO DE LA O CABRERA
Technical University of Madrid, Faculty of Architecture, Spain

ANDRÉS RODRÍGUEZ MUÑOZ
Technical University of Madrid, Faculty of Architecture, Spain

ALEJANDRO RESCIA PERAZZO
Complutense University of Madrid, Department of Ecology, Spain

MARIA FE SCHMITZ GARCÍA
Complutense University of Madrid, Department of Ecology, Spain

cultural landscape / energy production territorial systems / energy industry spatiality / conceptual model of landscape assessment / landscape transformation

INTRODUCTION

The development and commissioning of European environmental policies has given rise to a thorough review of the concepts traditionally underlying territory management in Spain. The most immediate consequence of implementing documents such as the European Territorial Strategy EC 1999 and the European Landscape Convention (Council of Europe 2000) is that spatial planning is now being tackled for the first time by several administrative regions. The essential goal of such policies is to come up with a global comprehensive plan that provides long-term territorial strategies. To this end, various regulatory instruments, such as territorial planning schemes and landscape laws, have been produced. In regional planning, the challenge therefore involves coherently linking the different economic and social activities with the environment, nature preservation, and with the protection of architectural, historical, and cultural heritage.

As part of the spatial planning of the regional socio-economic system, there is a vital need to revisit aspects of quality

FIGURE 1 In 1976 the ENCASUR mine "Emma" was opened. It had a maximum size of 1.5 by 2.5 kilometers and is still operating at full capacity, having produced up to 1,300,000 tons of mineral in 2009.

FIGURE 2 A distillery that made use of the oil shale stock (ENCASO) and a thermal plant that consumed coal were set up in 1952. In the eighties ENCASO was transformed in the present petrochemical plant.

and quantity of what is to be preserved. It is no longer a question of merely protecting buildings, historic districts or monuments, as used to be the case when implementing urban planning. This concept now extends to cover all larger notions of heritage, comprising what has been called Cultural Landscapes.

Particularly in Europe, cultural landscapes are considered to be part of the common heritage (Antrop 2005; Council of Europe 2000–2006; Schmitz et al. 2007) and different European initiatives focus upon their conservation and promotion (Wascher 2000; The Dornach Landscape Document 2000; Council of Europe 2000–2006). Under these assumptions, in Spain the Ministry of Culture drafted the National Spanish Plan for Cultural Landscapes (MCU-IPCE 2011). The general goal of this Plan involves safeguarding of landscapes with cultural interest, that is, implementing measures ensuring the viability of cultural landscapes.

A particular type of cultural landscape is usually referred to as "Energyscape"; it is shaped by processes related to the energy production industry, and which we have decided to term "Cultural Landscape of Energy." This type of landscape is defined as the complex spatial and temporal combination of the supply, demand, and infrastructure for energy within a landscape (http://ggili.com/es/autores/aleksandar-ivan-i-"Ivančić 2010, Howard 2012). Specifically, industrial

environments of energy production are some of the most complex spatial systems of territory. It obliges one to reflect upon the interaction between "energy landscape," "society," and "heritage" in spatial and economic development. Furthermore, energy production and energy distribution are important system services provided by energy scapes, the benefits of which are not well reflected in the classifications of socio-ecosystem services (Daily 1997; Fisher and Turner 2008; UNEP 2009; Howard et al. 2012).

Case-study: the Mining-Industry Territory of Puertollano as a Research Area for Testing a New Way to Assess Cultural Landscapes Puertollano is a small Spanish town populated by approximately 52,000 people, located in the Centre-South of the Iberian Peninsula. Although it belongs to a region (Castilla–La Mancha) featuring slow and scarce industrial growth, Puertollano constitutes a unique exception in its geographical surroundings: it is a highly industrialized town, well known nationwide as an important source of chemical and electric power (Cañizares 2000). Since the late nineteenth century, Puertollano has been associated with coal mining, although this industry has been taken over by the energy transformation sector (Cañizares 1999 2000) **[FIGURE 1+2]**. As opposed to other Spanish and European locations, the cultural importance of the industrial features of this
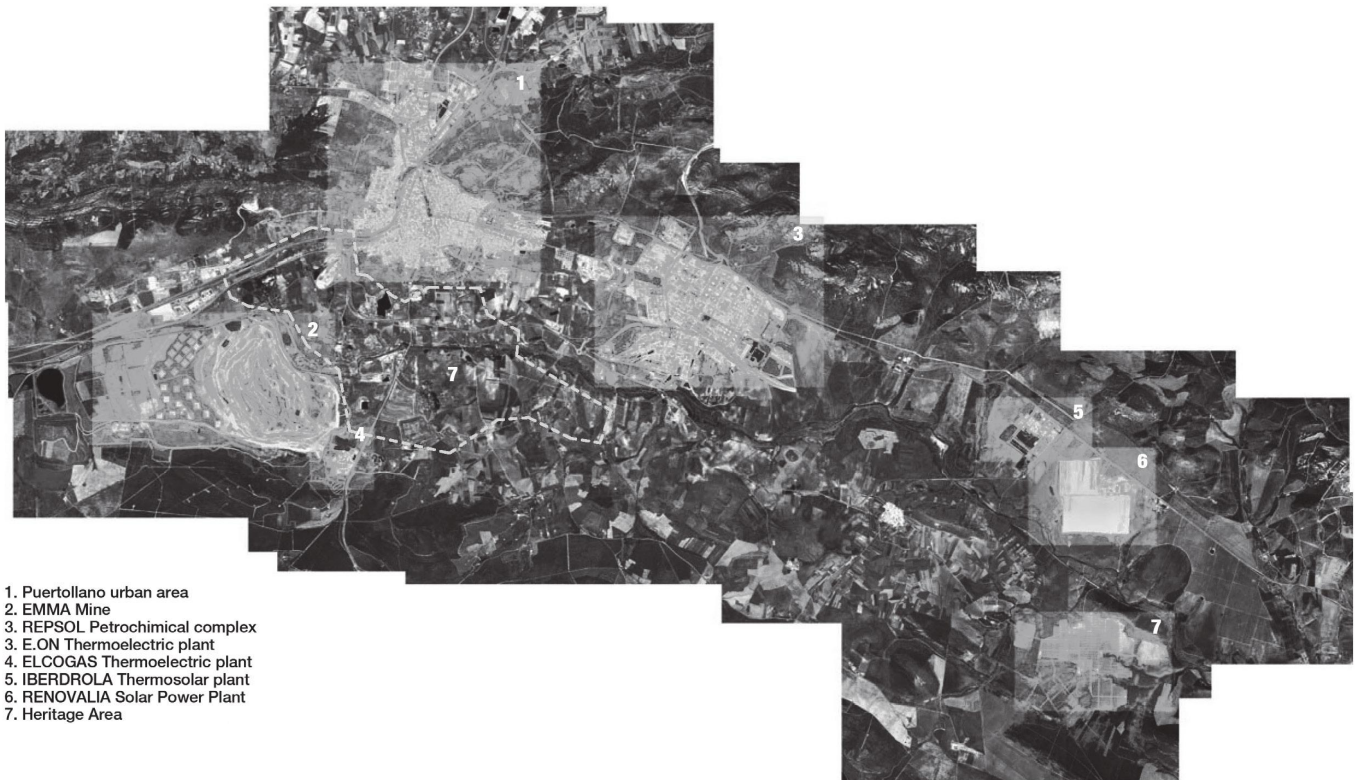
1. Puertollano urban area
2. EMMA Mine
3. REPSOL Petrochimical complex
3. E.ON Thermoelectric plant
4. ELCOGAS Thermoelectric plant
5. IBERDROLA Thermosolar plant
6. RENOVALIA Solar Power Plant
7. Heritage Area

FIGURE 3 Map comparing land uses and spatial balance between the different processes (city, mining, petrochemical, power plants, and solar farms)

landscape has been ignored by the town. The Spanish administration, however, granted this territory the status of Site of Cultural Interest in 2000. Additionally, the Territory Planning Scheme of the region (currently under public consultation) identifies "the sustainable revitalization, management, and use of the territorial heritage" as one of the three fundamental intervention points for the territorial unity of Puertollano (Pillet et al. 2007).

In this context, assessing the landscape of Puertollano is especially difficult: its territorial system is highly dynamic, and its landscape is in the midst of a transformation process. From this perspective, one might think that the shapes and forms making up the landscape are nothing but the reflection of an invisible energy structure spread throughout all levels of territory.

To date, the Public Administration has faced serious difficulties in the development and management of cultural landscapes. The challenge first arose from the proven inefficiency of traditional planning tools. In this context, our paper, through a case study, provides an overview of the development, potential, and some specific features of the cultural landscape of energy along the guidelines of historical landscape analysis and landscape planning [**FIGURE 3**].

SPATIAL HISTORICAL ANALYSIS OF THE PUERTOLLANO CULTURAL LANDSCAPE INTERPRETED THROUGH THE ENERGY FLOWS THAT SHAPED ITS TRANSFORMATION.
In 1972, the ecologist H.T. Odum proposed in the journal Architectural Design taking "energy and complexity" into account in the architect's work as an element of territorial planning. The main advantages of applying Odum's "energy systems theory" (Odum 1980) in landscape assessment are two-fold: firstly, the possibility of subjecting the territory to a progressive and ongoing assessment process in order to address the dynamism of the territorial process; and secondly, the chance to assess different space-time scales with one single tool.

In the same sense, Bernáldez's energetic methodology stands out and defends a two-fold dimension of landscape: on the one hand, there exists the "phenosystem," a perceivable dimension (vegetation, ground, town, factories, and so on), which is the appearance of the landscape that can be perceived. And on the other, there is also a hidden dimension, the "cryptosystem": a set of biophysical interactions and processes (an ecological system of energy and material flows) that are not directly perceived by the senses but which do create the landscape identity and architecture we perceive (Bernáldez 1981; Nassauer 1992). Landscape transformation can make invisible elements appear and reveal describing features.

FIGURE 4 Analytical cartography of the heritage area that exists between the city, the petrochemical complex and the mine "Emma."

According to the basics of the energy systems theory, a comprehensive method with a significant scientific element has been developed. This method seeks to assess and appraise the dependence of natural and socio-economic processes upon the territory systems whilst including the notion of heritage. Based on this hypothesis, the Puertollano landscape is understood as a material organization arranging and regulating energy flows, and also as an energy arrangement that stabilizes and maintains material forms. If we reconsider the history of the Puertollano territory as an open system—from an ecological approach—the possibility emerges to graphically represent its evolution by means of a series of functional diagrams. Flows and processes characterize the status and duration of prevailing spatial structures in the landscape.

The diagrams show the dynamic, changing, evolving, and adaptive nature of the Puertollano territory system and show how it works at a specific stage. This diagram is to be used to develop a critical inventory of the processes (petrochemical and thermal plants, etc.), resources (coal deposits, river, etc.), and flows (sun radiation, urban consumption, and so on) as important "drivers" for Puertollano and therefore necessary for subsequent assessment. Flow diagrams have been made for the different time periods considered vital with regard to understanding the historical creation of the

Puertollano landscape. The study of the development of these increasingly complex flow diagrams of increasing entropy and organization allows the footprint of the processes that shaped the landscape to be identified. This footprint is the physical image of depleted energy flows in the territory (Odum 1972).

Operating on Landscape Instability:
Simultaneous Potentiality in the Memory and the Emergence of Landscape. In highly vulnerable territories such as Puertollano, despite the fact that human activity continues to develop the landscape; a cultural landscape can already be identified. This gives us a head start with regard to classifying it as heritage before the productive processes themselves finalize and the landscape is perceived as mere romantic ruins. Starting at this early stage means tackling the assessment of the Puertollano Cultural Landscape from the point of view of transformation and we are thus obliged to reconsider the criteria and techniques used. The main process of landscape change currently result in alteration of landscape structure [**FIGURE 4**].

The notion of potentiality refers to the intrinsic ability of a place to become something different, to upgrade itself. Considering that any territory and land-use system can evolve in many ways, tracking potentialities becomes an

innovative methodology intended to prevent social and ecological decay of the landscape, bypassing the ethical and aesthetical arguments raised by conservationism (Millennium Ecosystem Assessment 2005). From a spatial perspective, landscape planning of the energyscapes must respond to the adaptation to new situations in a perspective of instability or elasticity of landscape.

The future of the cultural landscape requires re-accommodation strategies in order to revitalize its heritage features within a socio-economic system. That is, there is a need to insist upon the abovementioned criterion. As has been mentioned, any attempt to avoid loss of the cultural landscape must not make use of preservation models based on the intrinsic features of the place such as its beauty, uniqueness or vulnerability of flora and fauna, and so on, or radical naturalization strategies (covering hollows, building irrigation systems) that hinder creativity. Attempts in this sense should be based on the emergence of new useful activities. There is a need for further research to evaluate our method at other sites.

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READING A HISTORICAL HYDROELECTRIC LANDSCAPE. ALTA VALTELLINA AS A CASE STUDY

FRANCESCO CARLO TOSO

Politecnico di Milano, Department of Architecture and Urban Studies (DAStU), Preservation of Architectural Heritage, Italy; francesco.toso@mail.polimi.it

Francesco Carlo Toso graduated from the Architectural Engineering faculty at Politecnico di Milano with a final thesis on the subject of development, conservation, and reuse of historical rural buildings within periurban agricultural landscape systems. He has since been collaborating with PaRID (Research and International Documentation for Landscape) on the leading project for the revitalization of periurban agriculture in the municipality of Milano. He is currently a PhD candidate at Politecnico di Milano, with a fellowship granted by Fondazione AEM, on the subject of assessment and preservation of the dismissed historical hydroelectric facilities of the Electrical Company of Milan (AEM). His main focus is industrial heritage and the impact of infrastructure on past landscape transformations.

industrial landscape / alpine environment / hydroelectric facilities / heritage preservation / perception of infrastructure

CONTEXT OF THE RESEARCH

The early season of hydroelectric exploitation coincided with a radical change in the perception of the alpine landscape. It was in fact often intertwined with the shift from rural to tourism-based economy, for which it provided access routes and energy sources, most often as a compensation to stem the opposition of the local administrations. The representation of the alpine landscape veered to a form of "technological sublime," as the protagonist companies focused on the architectural features of the power plants as a means of self-representation and to distract from the radical territorial changes (Jakob 2012).

The subsequent process of rationalization of the hydraulic resources throughout the postwar years was based on the search for the most effective underground conduit schemes, thus constituting a largely invisible network, whose most visible external elements are the reservoir, transformer stations, and power lines. The outdated historical works, instead, are left as visible landmarks, devoid of their productive role. At the same time, the tourism sector does not include this aspect of the landscape as relevant among its

FIGURE 1 Hydroelectric iconeme: slope, penstock, power house. Valdidentro, circa 1930
(Archivio fotografico Fondazione AEM)

offerings, as it focuses mostly on the demand for experiencing a natural environment, local cultural traditions, and winter sport activities. Nonetheless, hydroelectricity has left a mark, in the form of works which not only shaped and regulated the natural alpine environment and continue to do so, but were also defining for the local society, since the ever diminishing strength of rural economies in the alpine valleys was compensated by the involvement in construction sites that lasted decades.

The little agreement on what constitutes an "industrial landscape" makes it necessary to define it on a case-by-case basis (Vanolo 2006). We consider the historical infrastructure and its relation to the natural environment and to its social and cultural significance, and we also assume that it can only be preserved as a heritage landscape if the meaning associated with its elements is still perceived by a community, a cultural subject who interprets the system of visual, spatial, functional, and symbolic relations (Scazzosi 2002). As such, there is not widespread awareness of the significance of the infrastructural traces in the making of contemporary alpine landscape. The aim of the study is to identify the components of the historical infrastructure and criteria for assessing the legibility of its traces and remains, to understand which perceivable elements can aid the narrative of the hydroelectric reorganization of the landscape.

STUDY AREA

From the territorial point of view, at the turn of the century the Valtellina valley depended heavily on the industrial and urban development of the city of Milan, as all the major industrial groups invested in hydroelectricity, thanks to the advances in long distance energy transmission, setting up clusters of development (Polatti 2002). The Alta Valtellina area, in particular, traditionally known for its handle and thermal traditions, has developed in relation to the power demands of the municipal electrical company of Milano, which secured the rights for hydraulic exploitation at the very beginning of the twentieth century in order to produce energy for public urban services. The exploitation scheme comprised the whole upper stream of the Adda River, up to its springs. The earliest hydropower plant, built in 1910, was to be regulated through an annual regulating reservoir, which would have submerged the alpine valley of Fraele. In the interwar years, while secondary facilities were built to meet the increasing energy demand, the biggest facility in Val Fraele was completed (Pavese 2011). The 1929 crisis brought a substantial turn to the early scheme of development, which was radically rethought through the introduction of underground power plants. The first phase of development, however, had already turned the area into a productive territory, with a substantial outcome on the landscape.
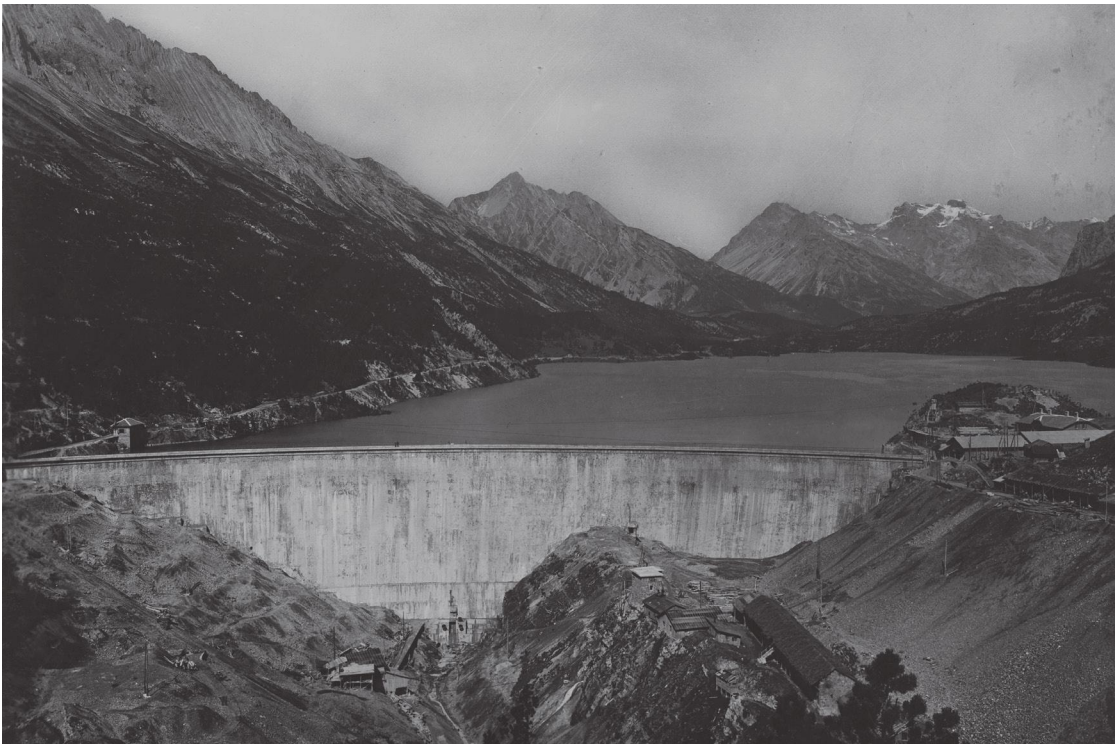
FIGURE 2 Hydroelectric iconeme: reservoir. Val Fraele, circa 1930 (Archivio fotografico Fondazione AEM)

FIGURE 4 Transitional landscape (San Giacomo reservoir, Lombardia)

LANDSCAPE AND STRUCTURES   **Energy Landscapes**

FIGURE 3 Abandoned penstock as a focal landscape

FIGURE 5 Landscape integration of a nineteen-twenties arch weir dam (Fusino reservoir, Lombardia)

STUDY MATERIALS

The proposed methodology considers three main sources:

- Historical technical documentation. Cartography and drawings give an insight on the process of remodeling and on the complexity of the infrastructure. It is a highly selective and design-oriented representation that deals with specific morphological and territorial aspects, such as orography, hydrography, and road networks in a visual and static way. It was integrated with reports detailing the construction process.
- Historical photography from the company's archives, meant to document the site work, construction progress, and the finished facilities. However, both the main subjects and the involuntarily portrayed features of the landscape allow us to set terms of comparison.
- The in situ assessment allows for a perceptive evaluation of elements and actual accessibility of paths and viewpoints.

ASSESSMENT

Technical documentation, by revealing the hidden side of the infrastructure, makes it possible to identify two main categories of elements: punctual and linear. The minor punctual works are either terminal parts of the network, meant to capture and regulate water fluxes, or surfacing parts hinting at the hidden relations to the vaster underground system

(that is, the upper portion of a surge shaft). Pictures of the facilities from different sources, such as the Italian Touring Club journal or landscape photography in later decades offer recurring themes. Recalling the concept of *iconema* as a synthetic and elementary unit of landscape perception (Turri 1998), we can identify two main "hydroelectric iconemes" which render a partial representation of the hydroelectric landscape through the most visible and characterizing parts of the facility [**FIGURE 1 + 2**]:

- the unity "mountain slope—penstock—power station," as perceived from the valley bottom or from the opposite slope
- the unity "dam—artificial lake—alpine valley," forming a visual enclosure

We can single out three kinds of linear elements—the subterranean tunnel conduit system: open-air, such as penstocks, roads, maintenance paths, and ex-light railway routes; overhead, namely the power lines, the ropeway conveyors, and aerial lifts. Each element has different scales of perception—dams and plants are landmarks that can be described from medium or vast scale panoramic points, while becoming an imposing and predominant at the close distance, the linear elements can be either described from the vast scale or along their length as a "focal landscape" (Fabbri 2010, 226); the minor punctual elements must be either perceived at a

closer distance as steps of an excursion or serve as land-marks to aid orientation. Finally, some elements have only left traces. The ropeway systems are largely dismantled and only the foundation works punctuate the rural landscape, they can be perceived mainly at a closer distance, but at the same time they help identifying potential viewpoints that put the visit path in relation to the settlements in the valley bottom. Dismantled penstocks leave a trace that can be perceived

at the medium to large distance due to its artificial morphology and becomes a visual corridor when crossed by the visit path [**FIGURE 3**]. An important feature is the "temporary landscape" originated in transition periods as a consequence of the water level regulation in the reservoir. While visually conflicting with the natural surroundings due to the removal of vegetation (IEA 2000), it reveals the former construction settlements, as modern archaeological remains which are an integral part of the older industrial landscape [**FIGURE 4**].

On contemporary structures, impact mitigation should be aided by the same criteria that we apply for the perceptive assessment of an existing landscape, by considering the dominant scale of the surroundings, their textures and patterns, the close, medium, and distant range inter-visibility [**FIGURE 5**]. While these criteria did not inform the design of historical facilities, some suggestions can still be drawn: the attention for materials and texture, that is, the use of granite stonework for the outer walls of the dams, the choice of local materials for auxiliary buildings, slope consolidation works incorporating traditional dry stone techniques, the use of wood in overhead lines. The abandonment of penstocks lets a spontaneous "linear garden" grow, reducing their visual impact in comparison to early pictures. This suggests

the opportunity to work on the texture of ground vegetation as an element of mitigation for new linear elements, such as cableway corridors.

CONCLUSION

In eighty years an evident modification and fragmentation has occurred in the analysed context—although the oldest power plants retain a high integrity value from a purely material and architectural point of view, they are functionally and perceptively separated from the other elements of the facility. If we take into account both the material level and the level of cultural representation, the preservation of a specific historical layer in the "material landscape" can be achieved only through strengthening its meaning in the parallel *mindscape* (Lörzing 2001). In our case study, this can eventually lead to minimal or no material intervention, since the goal of rendering the traces legible does not imply protecting unused works against natural processes, as much as providing an improvement in accessibility, signaling and information (Pavia 1998). This can only serve as the first step to re-insert the material landscape in a process of *patrimonialisation* of the local industrial past (Bergeron 2006), re-appropriation of its meaning by the local and tourist population, and stakeholder involvement.

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TOWARDS A SPANISH ATLAS OF CULTURAL LANDSCAPES OF ENERGY

CONCEPCIÓN LAPAYESE LUQUE
Technical University of Madrid, Faculty of Architecture, Spain
gi.pcultural@upm.es

Concepción Lapayese Luque is a Doctor of Architecture with honors from the Escuela Técnica Superior de Arquitectura of the Universidad Politécnica de Madrid, Master in Architecture from the Städelschule Frankfurt, and Diploma in Environmental Studies by the Bartlett School of Architecture (London). She is a professor at the Department of Architectural Projects of ETSAM-UPM and researcher of the Cultural Landscape Research Group, where she is coordinator of the Research Line "Laboratory of Large-Scale and Landscape." She is also the coordinator of the ETSAM Department of Exhibitions and Culture Expoetsam.' Additionally, she is a professor of Architectural Projects at the Universidad Europea de Madrid. She has also been a professor at the Faculty of Fine Arts of the Universidad Complutense de Madrid. She is the author of the book *La construcción del paisaje: entre la interioridad y la exterioridad* (2009) and scientific coordinator of the Textos Académicos de la ETSAM collection. In 1990, she founded her own professional office with Darío Gazapo in Madrid (www.gazapolapayese.es) which is specialized in rehabilitation and landscape projects.

MANUEL RODRIGO DE LA O CABRERA
Technical University of Madrid, Faculty of Architecture, Spain

ANDRÉS RODRÍGUEZ MUÑOZ
Technical University of Madrid, Faculty of Architecture, Spain

FRANCISCO ARQUES SOLER
Technical University of Madrid, Faculty of Architecture, Spain,

cultural landscape / industrial heritage / energy production / landscape valorization / landscape mapping / landscape representation

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"*Where are landscapes built from?*" (Gazapo et al. 2009)

Energy and territory are two realities that have become indissociable to the eyes of contemporary society. Though energy certainly does exert a crucial influence on the social and economic levels, this should not make us overlook its territorial implications. Indeed, the 5,984EJ (131,927 thousand tons of oil equivalent). Direct energy consumed by Spain in 2010 must necessarily have been produced in a physical place (LEE 2010). Since the beginning of industrialization, constant increase in Spain's energy demand has triggered a radical transformation of its physical environment through the development of large energy infrastructures. Thus, power stations, mines, pipelines, power transmission lines, oil refineries, harbors, dams, and wind farms have spread across the landscape weaving a dense network aimed towards the supply of urban regions, whilst configuring some of the more complex and relevant territorial systems. These, the inevitable negative of our cities and factories, are what we may call territories of energy. This exhibition *Cultural Landscapes of Energy* seeks to outline the spatial dimension of
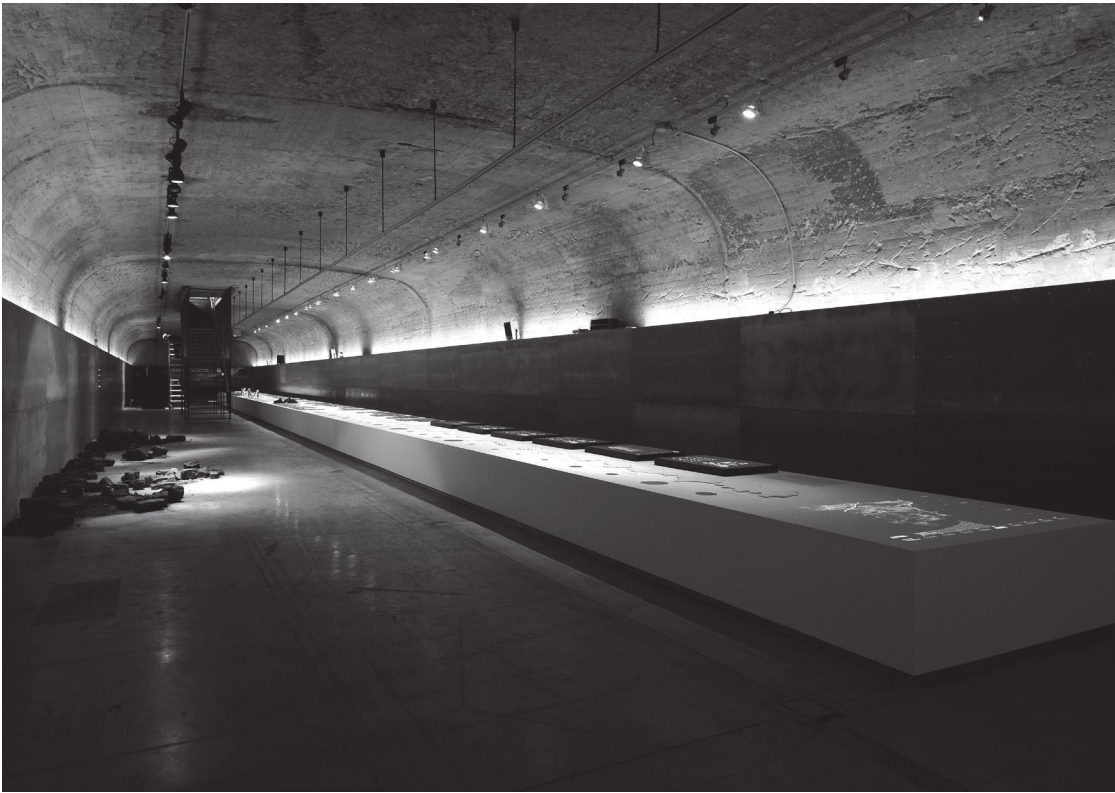
FIGURE 1 General view of the exhibition in La Arqueria de Nuevos Ministerios (Madrid)

these territories, which are fundamental to a post-industrial society, from an approach both analytical and discursive. It is analytical, in that it reveals the maps and charts that depict and quantify networks and systems as well as their associated technological, economic, production, or land use figures. It is also discursive, for it seeks a "reconstruction" of its cultural dimension through a subtle evocation trying to bring to mind aesthetic, social, heritage-related, and political concerns. The combination of both approaches allows us to build an atlas of sorts, a tool for accumulation and organization, which slides with a calculated ambiguity between the measurable and the perceptive, between data and sensations, between science and art, as a strategy for an integral approach to landscape.

The physical manifestation of this atlas in the exhibition is as a "table for the dissection of landscape" which is meant to remind us of the concept of "table" as a "privileged place to collect and present the (our) fragmentation of the world," in the words of Georges Didi-Huberman (Didi-Huberman 2010). The table is a display of information allowing for an open-ended reading and understanding of landscape. It is a form of exhibition whose operational value resides in its "always-open possibility of being modified, of creating a new configuration," allowing for the continual dissociation and redistribution of the exhibits and thus leaving the choice of

a path through the exhibition in the visitor's own hands. On a forty-five-meter-long table collections have been laid out of digital maps, tactile cartographies, newspaper covers, models, documentaries, film clippings, photographs, material samples, and sound registers each classified according to their own criteria. Relating to, wondering at, pointing out, and discovering are the proposed methods for an alternative way of looking at landscape that is complimentary to pre-existing knowledge.

THE NATIONAL ENERGY MODEL: FROM THE DIAGRAM TO THE MAP

Over the last years, concern over the sustainability of current energy models has led to the growth of public- and private-funded research in this field. Research carried out on economic optimization, on a hypothetical—though uncertain—capability for self-reliance, on the availability of resources, on energy-saving policies, on new technologies or on the improvement of the influx/utflux balance has meant that energy keeps making the headlines. However, interest in energy does not only come from a technological or economic standpoint, but also from the point of view of social issues—the transformation of the defunct mining industry—or environmental concerns, such as air pollution or landscape recovery.

FIGURE 2 Map of Spain with the twenty-four energy regions and their connections

Energy, pollution, and economic flows are indeed funda-
mental to an effective and comprehensive analysis of
the state of energy in Spain. However, one might wonder
whether, in the same way as a parallel is made between
energy, CO_2 emissions and money, the study of the energy
system's structural sustainability could also take into
account the area occupied and modified by these flows.
That is, whether a new diagram could be added measur-
ing land surface occupied by each of the transformation
processes. This last diagram opens the way for a novel
approach to the concept of sustainability as applied to
the national energy model. The hypothesis being from the
outset that energy occupies space and that further research
is needed into the relationship between energy and land
area throughout the different phases of the production
system, the first implication that may be derived is that
energy is a builder of space. Thus, a mere quantification
of land use may only be understood as a first step from
a strictly abstract model towards a model taking into
account spatial qualities (Ghosn 2010, 7–10); it should
open the way for a new, spatially oriented approach re-
quiring a leap forward: from the chart to the map
(Deleuze et al.1980).

THE TERRITORIALITY OF THE NATIONAL ENERGY INFRASTRUCTURE

Territoriality is the human-specific cultural trait that allows
for the organization of a territory by superimposing a per-
sonal order over the otherwise-chaotic nature (Grosz 2008).
Under this definition, infrastructure may be understood
as the fundamental tool for territorialization; that is, as the
supporting base for economic, political, and cultural struc-
tures, and therefore for the whole system of human relation-
ships (Portoghesi 1969). It is the infrastructural condition
that sets energy fundamentally apart from other industries,
as it is the reason for its certain role as the main system
structuring relationships between man and environment,
between society and nature; as a system, therefore, imple-
menting a specific logic for territorialization. It is also, in
essence, a markedly systemic infrastructure, for it comprises
"a complex fabric of realities and possibilities of a technologi-
cal—but also political, institutional, and environmental—na-
ture" (Aguiló 2006, 48). A look at the first projects for
a national energy system allows us to attest the tendency
of infrastructure, as a tool for territorialization, to construct
sites. These include sites for energy consumption, such as
urban or industrial centres, but also sites for transformation,
extraction, transportation or storage. It is these, and not the
former, that this project seeks to delve into. Consumption

FIGURE 3 Landscape transcriptors I: photographs, models, sounds

nodes have a self-evident presence as geographical sites; we have sought to define the equivalent for the latter. These sites we have called "energy regions"; they are geographical areas set apart by the influence on the territory exerted by a densification of energy infrastructures (excluding infrastructures for energy consumption). Our research has shown that approximately 80% of Spanish energy is generated (extracted, transformed, processed or stored) in slightly less than 20% of the national territory; this territory can be divided into twenty-four energy regions (Canary Islands and Balearic Islands are excluded). Their existence may be discovered not only through energy production parameters, but also through their economic, technological and cultural traits. This means that theirs is not a matter of mere land use, but also a complete spatial system that influences the territory in all its organizational and perceptive dimensions [**FIGURE 1**].

In this sense, it must be insisted that energy regions belong to a diverse set of times, so that—for instance—installed power for each is by no means a value limited to present day. By looking at the map for energy production figures at three separate points in the twentieth century one can clearly see that the relative importance of each region to total production varies gradually throughout the years, so that regions that may seem to have little relevance today could have ranked highly years ago. The concept of territorial heritage is present.

THE CONSTRUCTION OF LANDSCAPE: ENERGY BETWEEN NATURE AND CULTURE

Energy as a landscape is seen, taking advantage of the concept's ambiguous definition, as a pretext to draw a bridge between territory and society, between culture and environment, structured by a dialectic worldview and in opposition to any binary reasoning (Rowntree 1996). This is a view whose operational capacity lies—it must be insisted—on the indeterminate quality underlying the concept of landscape, allowing it to take part in any of many cultural processes as a form of representation and materiality (Wu 2010), and to organize and intertwine the social, political, and environmental relationships building territorial spatiality. Thus, landscape logics allow us to understand inter-environmental relationships and to discover the formal relationships between nature and culture (Gazapo 2008, 18).

Cartographies, documents, material samples, raised-reilef maps, sound recordings, documentary reels, photographs, film fragments, etc., are some of the many mechanisms for the interpretation of landscape—transcriptors—that are collected in our *[table]* atlas as tools for knowledge. The identity of the people that have shaped the landscape, the strength of energy both potential and kinetic, the monumental quality of new structures or the link between nature, technology, and power are shown through subtle, aesthetically charged images

FIGURE 4 Landscape transcriptors II: maps, films, newspaper covers

which highlight the cultural reality underlying the strictly industrial. In other words, through the specific action of infrastructures, a landscape is characterized, a location is built, and the link between nature and society and its significance as a cultural model are highlighted once again **[FIGURE 5]**. Landscape transcriptors shown in this atlas of energy, fragments as they are of landscape itself, pieces as they are "of our own, striking and complex, social self" (Corner et al. 1996), speak clearly and loudly of how culture and the physical environment are tightly interwoven (Gazapo et al. 2007, 14). All in all, this text seeks to propose, by means of the selected transcriptors, a deliberate path of oscillating scales, times and values through the spaces configured by energy industry in Spain. But the path as laid on the table is but one of the countless possible reconstructions of energy landscapes that may be derived from this atlas we present.

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FIGURE 5 Landscape transcriptors III: photographs, materials

Certain spectacular events should serve to release the energy needed to drive positive developments in towns and regions, such as Olympic Games, football world cups, world expos, or—as in Hamburg in 2013—the International Garden Show and the International Building Exhibition.

However, the trend towards "festivalization" is not just limited to major events, but applies to various different scales and dimensions of public and private events. Despite the extensive preparation involved in staging such an event, it is stil essential for sufficient focus to be directed at the capital expenditure and changes in the landscape space with long-term visions for its legacy use. Because, unlike the spectacular event itself, such legacy plans will sustainably determine the character of the sites that will still be utilized and maintained after the spotlight has been turned off.

The festivalization of spaces means a deliberate staging of exceptional situations. How can the experiments and innovative potential that are introduced by the events be sustainably integrated into everyday life?

What is the relationship between event and subsequent use? Is the initiating event actually in the background and its legacy use the true focus of attention, or the other way round? What priorities have which consequences?

How do planners treat what is left behind? What planning methods are also suitable for long-term processes?

How are the understanding of long term planning processes and process-related designs implemented in the curriculum of landscape architecture education?

nature
happened
yesterday

EVENTS AND CONVERSION

LARGE-SCALE EVENTS AND THEIR LEGACIES

COMMENT BY JOACHIM THIEL, HAMBURG

Throughout the last decades, events have become part of the standard repertoire of urban policy strategies. Encouraged by an inflationary growth of event formats and by the concomitant promises of a global consulting industry, cities and regions have increasingly sought to become host places for any kind of happening that may enhance their visibility on the global stage. From their local perspective these events essentially afford two things: first, they compel the temporary concentration of resources and, thereby, help spur the activity of local stakeholders and the public administration, even across organizational and professional boundaries. Second, they generally yield a material effect in terms of infrastructures, venues for sports and other forms of public gathering, and regarding the transformation of public space and the urban landscape.

JOACHIM THIEL

is a senior lecturer in Urban and Regional Economic Studies at HafenCity University Hamburg. He studied Urban and Regional Planning in Dortmund and Oporto and holds a PhD in Urban and Regional Economic Studies from Technical University Hamburg-Harburg.

The crucial challenge is, however, that the temporary needs of an event do not necessarily match the long-term requirements of its host place. On the contrary, there is an inherent structural conflict between the extraordinary circumstances essential for an event and the long-term and routinized everyday life of cities. The explicit focus on long-term regeneration, that London linked to the Olympic Games of 2012, can be understood as a deliberate attempt to deal with this conflict in a strategic way.

The classic narrative of ambivalence inherent to the relation between events and their legacies constituted the starting point of this panel. However, and interestingly, the presented papers offered a much broader approach to the phenomenon of events. Only the paper by Gülsen Aytaç and Robert Holden presents a standard case: the Olympic Games. They compare what London did for 2012, and how it drew on the negative experiences of previous host places in terms of balancing event requirements and legacy needs, with the plans laid out in the bid documents of the candidate cities for 2020. It is impressive to see how a too strong concentration on an event can end up as a disastrous waste of money in the long run.

The other extreme of events is highlighted in Barbara Krátká Adámková's contribution on "Brno's little loops," micro-interventions into the urban space that are to change people's perceptions of cities. The loops consist of urban pedestrian circuits through places that had previously been outside the awareness of the urban population. Her findings show that legacies are not a matter of bigness. On the contrary, micro-events definitely afford an easier balance between the short-term and the long-term.

Tasneem Tariq's paper starts from a completely different angle. Her core question is how the design of venues can support the way in which event and legacy can equilibrated. She presents a very sensitive design of a sports venue embedded in a public park that should be able to attract population even when no event is taking place.

Susanne Prehl offers a radically distinctive perspective. She does not talk about deliberately planned events, but focuses on unwanted and unexpected incidents: earthquakes. Her paper is on Istanbul and addresses the role of public green spaces before, during and after an earthquake. It offers a very drastic version of how the anticipation of event legacies contributes to how they are eventually shaped. This finding is definitely transferrable to planned events.

The paper by Francisco Meireles Rodrigues has a methodological focus, looking at the user assessment of green spaces. While it thereby moves the discussion away from the core of the panel, it offers a very helpful approach that can both be used for the ex-post impact evaluation of events with regard to green public spaces and support ex-ante planning and the anticipation of legacies in these spaces.

Overall, the panel has shown that it can be worthwhile to leave well-worn trails in the analysis of events and their legacies. The broad range of perspectives offered in the contributions helps widen the analytical horizon, but also encourages a more robust design of future and more sustainable urban event policies.

TREMORS AT GEZI PARK: CHALLENGES IN LANDSCAPE ARCHITECTURE AT ISTANBUL'S EARTHQUAKE RISK

SUSANNE PREHL

Bauhaus-University Weimar, Breimann & Bruun Landscape Architects, Germany
susanne.prehl@gmail.com

Susanne Prehl is landscape architect and PhD candidate at Bauhaus-University Weimar, Germany and is currently employed at Breimann & Bruun landscape architects in Hamburg. She holds diplomas in Landscape Architecture and European Urban Studies. Her research areas are focused on open space planning and urban development, with a main focus on Hamburg, Istanbul, and Italy.

open space / earthquake / landscape architecture and resilience

LANDSCAPE

Gezi Park is probably one of the best-known public parks in Istanbul. Situated right behind the famous Taksim Square in Beyoğlu, it gained international public recognition in June/July 2013, when protests against governmental plans to replace the existing popular park area with a shopping center and by a residential area, provoked a nationwide public movement against the increasingly autocratic regime of Prime Minister Erdoğan.

Interestingly, Gezi Park's development is not that unusual within the Turkish urban development. Rather it vividly typifies the Turkish way of implementing building projects in Istanbul's dense inner-city neighborhoods, in order to maximize the built areas at expense of public spaces (Prehl & Zeybekoğlu-Sadri 2013) **[FIGURE 1 + 2]**.

Which implications does the resulting shortage of open spaces In Istanbul entail? The still growing metropolis with more than fourteen million inhabitants (http://www.turkstat.gov.tr, 2013) is situated in short distance (fifteen kilometers) from the main Anatolian fault. This causes earthquakes to happen frequently along this fault. Accordingly the earthquake hazard in Istanbul is very high with a 2% annual

FIGURE 1 Gezi Park/neighborhood park close to Taksim Square

FIGURE 2 Topcu barracks project at Gezi Park
(source: www.skyscraper.com, visited 06.10.2013)

probability of occurrence of big earthquakes. (GFZ 2011)
The latest earthquake reaching Istanbul was the Kocaeli-Earthquake of August 1999. Its effects gave an impression of the possible destructions a big earthquake could cause if its epicenter in Istanbul. Istanbul has grown in an unplanned manner, it is estimated that about 60% of its building stock has been raised without building permits and is therefore not earthquake proof. Flawed land-use planning, insufficient infrastructure and services, environmental degradation, as well as inadequate architectural design/construction and poor inspections render the city even more vulnerable to earthquakes (Barnes 2010; Okay 2007) **[FIGURE 3]**.

For landscape design one question is of particular interest: *Can landscape architecture as planning discipline meaningfully contribute to disaster prevention planning to render a city—in the presented case Istanbul—less vulnerable to earthquake's impact?* To answer this question three issues will be discussed: 1) *Do open spaces influence the city's vulnerability in earthquake emergency?* 2) I*f yes, how can the imminent earthquake catastrophe be taken into consideration in the field of landscape architecture? and* 3) *How do Istanbul's specific characteristics influence the work and the responsibilities of landscape architects with regard to earthquake hazard?* The author bases her answers to these questions on expert interviews and on a broad literature research.

OPEN SPACES:

FUNCTIONS IN EARTHQUAKE EMERGENCY.

Today disaster management enters a spatial dimension and suggests transformation and adaptation of the urban fabric to render cities more resilient to catastrophes (Eckardt 2011). Earthquakes tend to happen in long time cycles. These intervals allow planners to think in periodical dimensions of destruction and renewal: before, during, and after an earthquake. These dimensions need to be taken into consideration while analyzing open space functions in earthquake prone cities.

Before a catastrophe public open spaces serve as meeting and market places or as recreational areas. They give room to advance (political) opinions and (social) exchange. They improve the cities climate. Thus, their function does not differ from regions without earthquake hazard.

During an earthquake two important dimensions can be added to that list. Public spaces serve as escape roots, as they can provide protection against collapsing houses. Furthermore, they keep their role as meeting places during the emergency.

After an earthquake public spaces often are the only accessible urban spaces. They can easier be cleaned and serve as places for temporary emergency accommodation—shelter settlements. Via helicopter landing spots, help can

FIGURE 3 Istanbul megacity with more than fourteen million inhabitants

be supplied easier. Furthermore parks are reservoirs for clean water. They serve as buffer zones around polluting industrial facilities. Above all, popular open spaces like city parks and neighborhood plazas can turn into important spaces of identity and hope after an earthquake. Less destroyed, they can remind inhabitants of the former city's character and appearance. (Interview Werthmann 2012; Prehl and Gönenc 2012; Prehl and Zeybekoğlu-Sadri 2013)

LANDSCAPE ARCHITECTURE: FIELDS WITH EARTHQUAKE RELEVANCE

Thus, open spaces fulfill important functions in earthquake-endangered cities. There, planners need to take the periodical dimensions of destruction and renewal into consideration to develop open spaces that embody a high degree of spatial and functional flexibility and accessibility.
Thereby landscape architects can improve the city's ability to withstand disaster by considering the necessities of open spaces in different working fields

- Urban Design on neighborhood's level: Open spaces are to be equally distributed in the city to serve emergency function. Though, the spatial connection of these spaces is of vital concern. Main emergency routes should be accompanied by earthquake proof buildings or kept free of high-rise buildings. Furthermore, a connection to superior infrastructure has to be secured. Accordingly an interdisciplinary approach towards planning especially within the fields of urban design, architecture, and engineering should be obligatory.
- Landscape design on project's level: The particular space's functions in earthquake emergency and in every-day life need to be defined before planning. Accordingly the space has to be dimensioned, shaped and furnished taking the

multifunctional approach of periodical using dimension into consideration.
- Research, publication, and exhibition: it is within the responsibility of landscape architects to communicate public's open space importance in earthquake emergency to a broad public. Thereby the function's being overtaken by open spaces in earthquake emergency should be clearly expressed. Thereby exhibitions and urban art intervention can help to inform inhabitants and officials.

ISTANBUL: EARTHQUAKE CONSCIOUS PLANNING ENVIRONMENT?

After Koaceli earthquake, planning authorities in Istanbul recognized the threat and initiated the development of the Earthquake Master Plan for Istanbul (EMPI) that was completed in 2003. In respect to open spaces the document claims to create urban green area systems, buffer zones and earthquake parks. High-risk neighborhoods should be transformed via urban regeneration projects. Case study neighborhoods (Zeytinburnu, Kücükcekmece, Fatih) have been defined to implement these ideas. Furthermore, open space areas for emergency accommodation have been allocated to remain free of any construction.
Analyzing today's situation, the implementation of the mentioned ideas has not been very successful. Particular projects, like the applications of an earthquake park in Fatih (Fatih Aksemsettin Park), are an exception. A major step forward towards a risk-minimizing type of open space planning has not yet been taken. On the contrary, more and more building developments, even urban regeneration projects being originated for earthquake mitigation, are constructed on "empty" inner-city open spaces, some of them rather allocated for emergency accommodation.

The project's application is left for private contractors. Accordingly financial profit and economic growth become the leading arguments that stand against open spaces preservation (Prehl and Gönenc 2012; Prehl and Zeybekoğlu-Sadri 2013).

SUMMARY: LANDSCAPE ARCHITECTURE: MEANINGFULLY CONTRIBUTION TO DISASTER PREVENTION?

In a city like Istanbul that is constantly exposed to the danger of new earthquakes, the preservation and implementation of open space is of greater importance than may first be apparent. Open spaces cannot only improve the quality of life before an earthquake, but they reduce the risk of catastrophes after one occurs. Until now, planning disciplines, especially landscape architects and city planners, failed to overtake their responsibility to enrich the pro open space discussion against the economic interests by the earthquake argument.

But still, it is within the task of landscape architects to take responsibility and to turn the immanent earthquake catastrophe into an opportunity.

During the first days of complaints at Gezi Park, protestors argued against the cutting of old trees, they mentioned the importance of the park in the neighborhood and criticized the developer's concept and approach. An awareness of the importance of the site—as one of the last remaining open spaces of the neighborhood—in case of earthquake disaster did obviously not exist. Adding the risk landscape's argument to the discussion would not have changed the movement at Gezi Park, but it would have increased the awareness for the necessity of high-quality open space in dense inner-city neighborhoods like Beyoğlu among the authorities and private-sector financiers.

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PROJECT FOR URBAN INTERVENTIONS 2011 BRNO'S LITTLE LOOPS (BRNĚNSKÉ TOČENKY)

BARBARA KRÁTKÁ ADÁMKOVÁ
Mendel University in Brno, Faculty of Horticulture, Czech Republic
bara.adamkova@seznam.cz

Educational background: degree: Ing. in Garden and Landscape Architecture (Diploma theses: Specifics of designing town courtyards), after that Ph.D. in Garden and Landscape Architecture (Ph.D. theses: The English Landscape School and its influence on the Czech Republic), both at the Department of Garden and Landscape Architecture, Faculty of Horticulture, Mendel university in Brno. Teaching experience: from the year 2003 many various, presently teaching: Studio Work I, II (guarantor), Basis of Spatial Composition (guarantor), Spatial Creation (guarantor), supervisor of Bc. and Diploma theses. Also a leader of a research team with the topic: Forms and Genius of a Garden in the Urban Open Space.

ANNA MAGNI
Mendel University in Brno, Faculty of Horticulture, Czech Republic

JANA ZUNTYCHOVÁ
Mendel University in Brno, Faculty of Horticulture, Czech Republic

PETR FUČÍK
Masaryk University, Faculty of Social Studies, Czech Republic
fucik@fss.muni.cz

urbanism / open space / terminal station / planning concept / mental / spirit of place

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FOREWORD BY PETR FUČÍK, SOCIOLOGIST

The project Brno's Little Loops is a case study result of library research that was able to merge conclusions of phenomenology oriented sociology with architecture. The underlying idea is that the material essence of our towns is only a foundation for the construction of a phenomenon. Town as a mental image does not exist without its perceivers and their patterns through which they read the town (see works of Michel de Certeau). Besides the question of how to change the material town, there is a very tempting and minimalist version of "mental urbanism"—i.e. the question of how the patterns through which participants interpret their town could be changed.

INTRODUCTION — PRESENT STATE OF AFFAIRS

Until the revolution of 1989, there was a nearly forty-year-long period in the former Czechoslovakia when all the public space was in the common ownership of the socialist state. The situation turned upside down after the revolution in 1989. Each land, each place has its own owner. The owners can be private or legal persons, as is usual in all
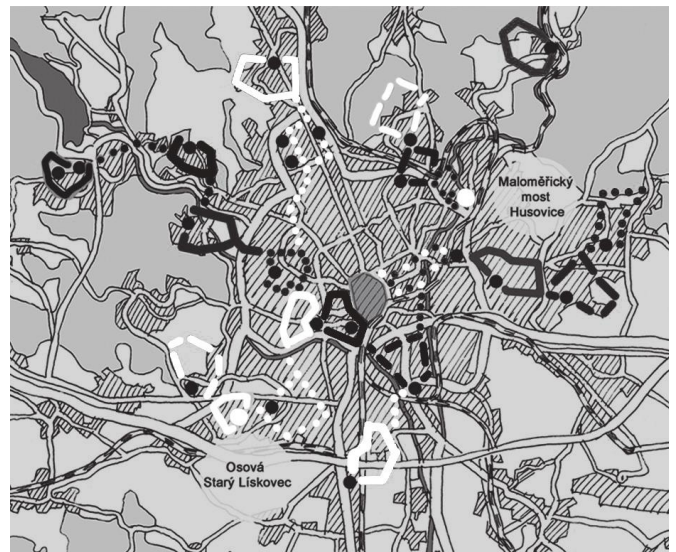
FIGURE 1 A sketch map of all supposed Little Loops in Brno (interconnecting the city center and the landscape)

democratic regimes. The urban open space is mostly owned by the given town or the state. We can say that the towns started to be aware of the significance of the urban open space and it's planning in the last ten years only and they started to invest. However, the situation is still deficient, both in large and small towns.

Town inhabitants who do not agree with this situation are reinforcing their positions and discovering options of community planning, participation, citizen associations, initiatives, and other activities through which they can intervene in the open spaces. We can see that town inhabitants are more and more tired of the unclear political situations, characterized by hopelessness, unreliability, affairs, and corruption. They are starting to live their own parallel lives independent of the politics. They are starting to settle the town in their own way, imprinting their individualities in it. What would formerly have died of vandalism, remains. However, in spite of these careful attempts, the public awareness about the possible use of urban open space is very low. The public, when asked what they miss in the open space, commonly mention the vague term "greenery." However, what the essence of this term is remains undefined. And thus also unmet.

The urban open space starts to be the venue for more individual activities of differently oriented town inhabitants. One of the most distinctive projects so far has been the *Urban Interventions,* first held in Bratislava in 2008. The concept authors, architects Matúš Vallo and Oliver Sadovský (Vallo Sadovsky Architects), addressed several of their colleagues and architecture studios and challenged them to choose any urban open space and create its proposal, with no claim to royalties. The project gained very positive feedbacks and was repeated in Prague and Brno. The place, the topic,

the approach—all these are left with the proposal authors completely. The text of the Brno call clarifies the essence of the project: "*The shared urban space is public property. The Urban Interventions are architectonic proposals that nobody ordered. They were all created out of the authors' inner or professional needs. The needs to show what does not work in the urban space, although there is a solution. ... To show that even small changes can have big effect in the context of the town*" (Urban Interventions 2011).

In total, sixty-three designs of various places were submitted in Bratislava and 81 designs in Prague in 2010. The Brno call was responded with an exhibition presenting 130 original designs. We, authors of the project *Brno's Little Loops,* decided to use our continuous research results concerning the topics related to urban open spaces and the current sentiments in the society. The aims of the specific research within Urban Interventions were to find the adequate way to reveal selected values and the potential of the urban open space for the town inhabitants, as well as find the way to strengthen or initiate their resolve to take part in the interventions in open space directly and actively.

METHODOLOGY

The essential research question was: Can we change the patterns through which people interpret their towns? The research methodology was theoretical and experimental (applied planning concept). Each design process of a selected place is a kind of research. We also chose the design method of a case study in the model town Brno, which was based on theoretical assumptions and knowledge:

- a study of a wide range of professional literature on urbanism, landscape planning, sociology, art, etc. (library research);
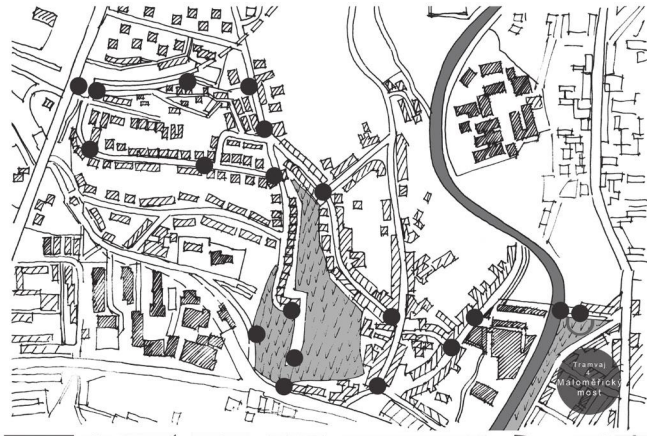- knowledge of the current status and the most frequent ways

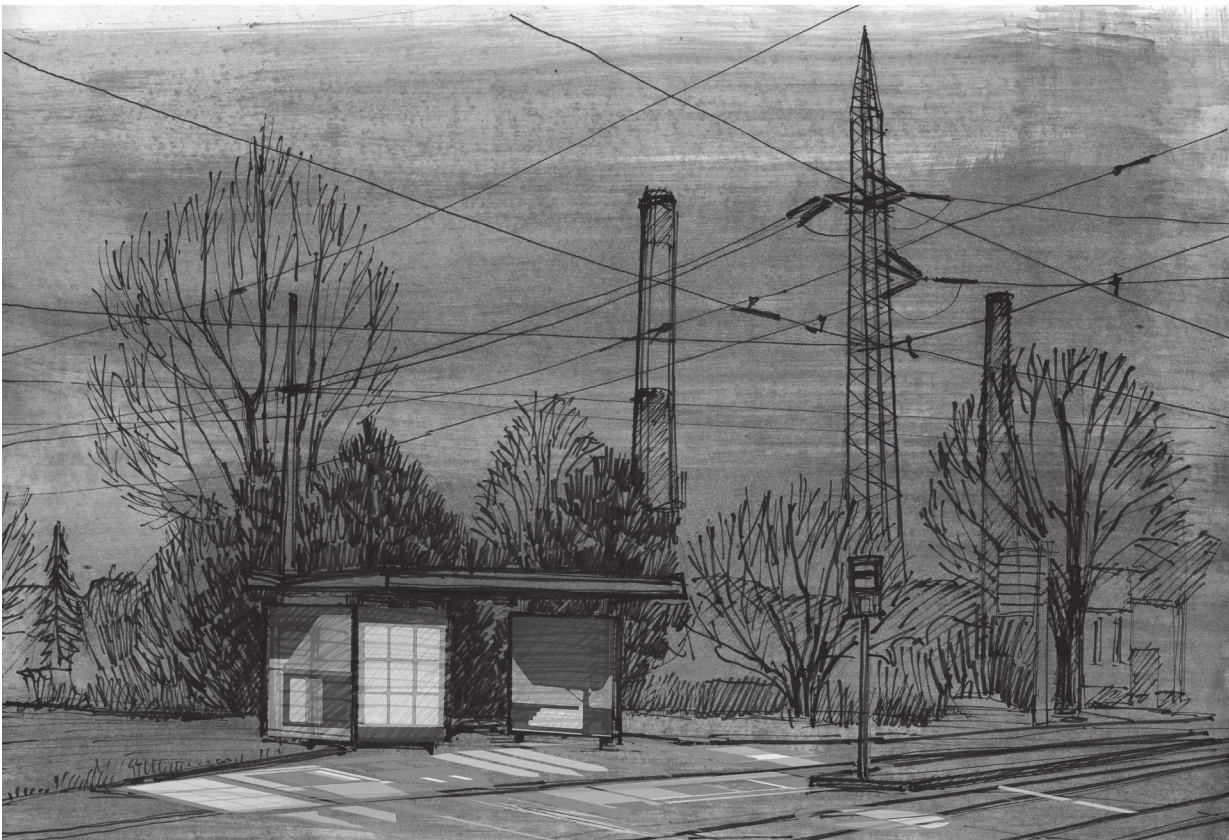**FIGURE 2** The exhibited poster for Little Loop Maloměřice

FIGURE 3 The exhibited poster for Little Loop Osová

FIGURE 4 A man looking at the symbols and asking us for its meanings (Photo B. Adámková)

FIGURE 5 A woman did not register any change (Photo B. Adámková)

of Brno inhabitants' interventions in the urban open spaces (the methods of observation, documenting, comparison);
· bachelor thesis by Jana Zuntychová (2010); she is the author of the idea of loop terminals of the public transport as places with special feeling (supervised by Barbara Krátká Adámková)
· authors' previous experience from differently oriented studies and designs of the urban open space confronted with the most recent sociologists' knowledge.

The Urban Interventions 2011 gave the participants complete freedom as regards grasping the issue and searching for a response to the research challenge. The team sociologist Petr Fučík suggested using the term "mental urbanism" as an expression of the effort to change the inhabitants' perception of the town image by means of minimum changes to the urban environment.

The theoretical background was then followed by the method of experimental designing in situ. The basic aim was to identify the genius loci of suburban Brno districts Maloměřice, Husovice, and Osová. Designing was carried out concurrently with the thorough terrain survey, in which the authors of the case study went through the entire district and documented and analyzed its typical features and effects and immediately examined their possible physical or mental expression. They searched for the way to interpret the *genius loci* for the public by a minimum intervention in the structure of the place; at the same time, not to concentrate on visual, but also sound, tactile, and other forms. The material

from the terrain surveys was then analyzed, formulated, and elaborated into a complex concept of Brno's Little Loops.

RESULTS — PROJECT BRNO'S LITTLE LOOPS

The concept of Brno's Little Loops creates a new structure of urban pedestrian circuits, which start at the places of loop terminals of the public transport [**FIGURE 1**]. These are specific for their round shape and a position at the border between the town and the landscape. They are also a place where many people stand, wait and watch. This is often one of the few moments within a day when people stop and have the opportunity to realize the time and the place. Loop terminals are initiation places for the pedestrian circuits leading to the center of the district (inhabited by a community). Each circuit is marked in a different way, inconspicuous, but still sufficiently readable. This can be graphical symbols, lines, various elements and motives reflecting the characteristic structures, textures, forms, the spirit of the place—district. These are not always physical elements— the tram loop can be marked by a transfer in the space (telescope), sound effect, texture, etc. It mediates an unusual, unobtrusive view of the place, the road where getting lost is the demanded beginning of discovery.

Brno's Little Loops are a new real (not virtual) town 3D game that:
· interprets a place and challenges the viewers to reinterpret
· can be the impulse for a change

- tells inhabitants to be active in urban open space
- strengthens the significance of peripheral parts of the town
- changes the usual tracks of inhabitants-moving
- becomes the target of modern tourists.

The research results were chosen to be published on two posters within the exhibition Urban Interventions 2011, presented orally and in the printed exhibition catalog [**FIGURE 4 + 5**]. The option of the project implementation in the framework of the tuition at the Department of Garden and Landscape Architecture is still being developed.

EXPERIMENTAL IMPLEMENTATION

So far, one attempt at a direct implementation of the project and thus a verification of its effect has been conducted. We carried out an experimental simplified version of the Little Loop Maloměřice. Graphical symbols abstracting the character of the district were painted to the ground and other visible places in the surroundings of the tram loop terminus there. In the same way, a part of the circuit Maloměřice was implemented. We explored and recorded reactions of inhabitants. One of the conclusions was that many of them devoted their attention to the new elements [**FIGURE 4**], but not all of them delved into a more detailed exploration [**FIGURE 5**]. However, it is highly probable that a well-performed form of Little Loops could at least partially meet the authors' expectations—minimum changes of the place could change inhabitants' perception, which could lead to their other interactions (the hypothesis of a higher inhabitants' interest in the place where they live, greater participation in its development, their individual interventions in the urban open space, and so on).

CONCLUSIONS

Town streets and open spaces have always served for contacts and communication among people. They have to ask the people to stay, be equipped similarly to people's homes. The inhabitants of the town create them. Garden design in this century should not be independently active and an inhabitant only a passive onlooker. Should the urban open space be functional, mutual influences and communication are necessary. Especially at the time when shopping centers in the suburbs abuse their knowledge of archetypal principles

of towns for profit and become strong competitors for historic centers.

Many people cannot fully perceive the features of the place where they live; they do not know what is valuable and what its *genius loci* is. We all are losing these abilities. Brno's Little Loops only indicate, reveal, partially. They challenge us to create our own reflections, they open opportunities to explore. And interact. People can themselves design their own loop and connect it with the system.

The idea of Little Loops and its following experimental implementation has examined the effect of minimum changes of the urban environment on the inhabitants and has opened the discussion about possibilities of mental urbanism. Politicians speak on TV, people in the streets. If so, we can see an origin of something that reminds us of "urbanist underground"—adaptation of the town environment to the individual needs of inhabitants or communities without respect or waiting for official decisions and political negotiations. If something like this in its wild form is awaiting us in the future, there is one of the most important tasks of garden and landscape planners: to provide the public and the students in the field with as truthful and complex picture of values and potentials of the urban open space as possible with the emphasis on features of the spirit of the place.

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INTEGRATING THE SPACE OF MEGA-EVENTS ALONG WITH THE LANDSCAPE OF RANGPUR, BANGLADESH

TASNEEM TARIQ

Bangladesh University of Engineering and Technology (BUET), Department of Architecture, Bangladesh
nimmi_43@yahoo.com

Tasneem Tariq has completed her Bachelor of Architecture from the nationally renowned Bangladesh University of Engineering and Technology (BUET), where she has served as lecturer for three years. She offers several courses at the Department of Architecture and at the Department of Urban and Regional Planning of BUET. Her research covers eco-sustainability, environmental design, thermal adaptation, and design issues. She is also involved in several projects as a design team member of Consulting Architects' Forum—Bureau of Research, Testing, and Consultation (CAF-BRTC), BUET. She has dealt with landscaping and microclimate in the project of "Dhaka and Rangpur Zoo Modernization Project: Digital survey & feasibility study," Bangladesh.

open space / integration / festivalization / cultural landscape / long-term planning

INTRODUCTION

Open spaces are one of the major elements of the urban landscape. These urban open spaces are the "breathing zones" of a city. In rapidly urbanizing countries, public open spaces are shrinking at an alarming rate. It is found that a number of large and medium scale open spaces are scattered in Rangpur, one of the cities of northern part of Bangladesh. The process of preparing Master Plan for Rangpur City Corporation of Rangpur, has been undertaken to provide guidance for the development and development control of this area. Accordingly initiative has also been taken to prepare Strategic Plan, Structure Plan, Urban Area Plan, and Detailed Area Plan of Rangpur city. Structure Plan and Action Plan were prepared for Rangpur paurashava in 1986 by the Urban Development Directorate under Bangladesh National Physical Plan Project but was not enacted and thus was never used for development and control of Rangpur Paurashava (LGRD 2012). Rangpur City will soon contain an International Cricket Stadium at its central open space. So it is high time to analyze how to create a well-connected stadium layout where all other surrounding public gathering spaces like open spaces, zoo, parks, etc., will

FIGURE 1 Innovative megastructure inspired by the landscape of Rangpur

be connected so that people can enjoy the beautiful landscape which will also have a positive social, cultural, and environmental impact on the city-dwellers.

NOTION OF THE PROBLEM

Rangpur City Corporation is blessed with natural resources like open spaces, parks and water bodies at the center of its city heart. This area has high potentiality to be developed as the central "recreational hub" of the city. These green open spaces are needed for environmental and ecological balance. It is usually observed that the role of public open spaces at community and city level is important to increase human interaction to improve the social ties and social control for future generations. Now this paper aims to the provide some specific guidelines on how the structure of the stadium can be premeditated with the surrounding area so that it can create an association with the natural resources as well as function well as a stadium. This paper also intends to identify and integrate the surrounding public gathering spaces of the central area of Rangpur City Corporation with the stadium area.

OBJECTIVE OF THE STUDY

This paper mainly focuses on designing an innovative space of mega-events inspired from the landscape of Rangpur, Bangladesh. It is also intended to study the existing public recreational spaces like a zoo, football stadium, Chiklee Lake, and Kukrul Lake, in order to create a relationship with the stadium complex. The objectives of the research are, therefore, as follows:

· To identify the areas of public open spaces, parks, play grounds and other recreational spaces like green belts, retention pond, water bodies, natural reservoirs , and so on around the existing site of cricket stadium.
· To analyze how to design a stadium that will be well connected with these public open spaces and to analyze the ways how to get inspiration from the nature and landscape to design a space of mega-events.

PROFILE AND LOCATION OF RANGPUR DIVISIONAL TOWN

Rangpur city is located in the northern region of Bangladesh [FIGURE 2]. Geographically it is located between 15°03' and 26°00' North latitudes and between 88°57' and 89°32' east longitudes. Rangpur is situated on the bank of the River Ghagat—a tributary of the river Teesta. It is 335 kilometers northwest of the capital city, Dhaka. Rangpur is the seventh largest town of the country. According to the Population Census 2001, total population of Rangpur Paurashava was 465,768. Population growth rate here is higher in comparison to other medium sized cities.
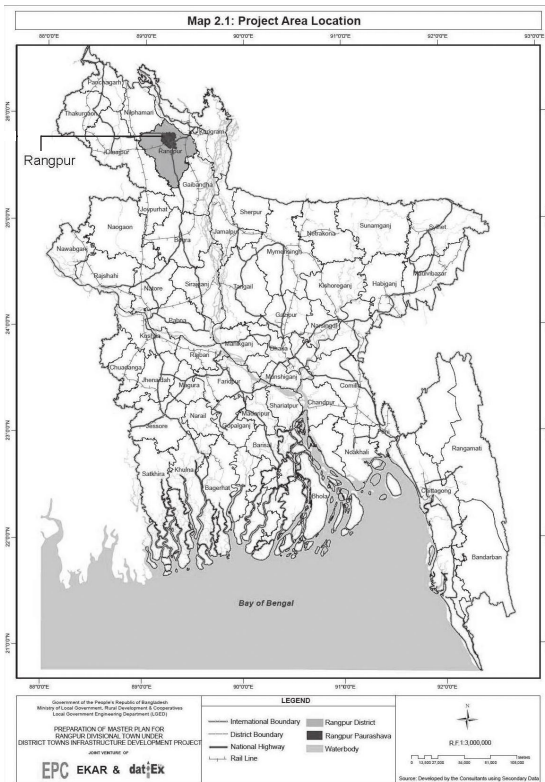
FIGURE 2 Location of Rangpur (Source: LGED, 2012)

The importance of Rangpur town enhanced with the declaration of Rangpur division in January 2010. The Rangpur Municipality had been upgraded into City Corporation in 2011. Rangpur division has a bright prospect to become one of country's strong economic bases. The region is endowed with various natural resources and if proper attention is given in exploitation of these resources, it is likely to become a prosperous economic zone of the country (LGRD 2012). The region will demand high-level services in education, healthcare, job security and other opportunities commensurate with a regional center. Simultaneously the need of recreational zone as well as interactive spaces will become one of most the important priorities of the city. Therefore, it is important to prepare a proper Master Plan for the physical growth of the city so that it can meet the recreational need. There are other important heritage sites, such as Circuit House, Bethpatti Zamindar Bari, Rangpur Zilla School, Koilas Ranjan School, Kalimandir on Station Road, Shamshan ghat on D. L. Roy Road, Old Bridge on Shamashundari khal at Khasbagh, and Khal itself, which is a man-made canal serving as the backbone of the drainage system of the city. Near the stadium, there is a very beautiful place called "Chikli Vata," surrounded by several large water bodies and lush green paddy fields.

PUBLIC GATHERING SPACES OF RANGPUR

In "Rangpur Structure Plan: Rangpur Pourashava" it is mentioned that recreational facilities in Rangpur are conspicuous by their absence (UDD 1986). Most games and athletics are practices and held in collectorate ground. The stadium is in a bad shape, while the newly constructed gymnasium has been commissioned by the District Sports Association. The need for parks, playgrounds, and recreational facilities are real and pressing.

The Paurashava has undertaken a scheme of developing the Chiklee Lake into a lake park but inadequate access, funds, insensitivity to the natural features and isolation from the urban fabric render the park unattractive. Lakes—both Chiklee and Kukrul—are excellent natural resources for recreation. They have higher potentials than is being realized. There is no reason why these cannot be developed and integrated into the urban system. So, if proper actions are taken, there is a high chance to improve the existing recreational condition of Rangpur. Highly potential central "Recreational Hub" is identified which is consisted of several gathering spaces as listed below: Rangpur Zoo and Botanical Garden, Football Stadium, Cricket Garden, Shuruvi Uddan, Rangpur Shishu Park, Chiklee lake, Kukrul lake, Shamshundoru Canal, Eidgah, Long Tennis Complex, Table Tennis Complex, Rangpur Zilla School Field, Rangpur Govt. College Field, and so on.

CHIKLI LAKE

LAKE AT ZOO

LAKE BESIDE FOOTBALL STADIUM

SITE FORCES

FANSHITOLA(HONUOMANTOLA)
1857

EID GAH

RANGPUR COLLEGE

D

SITE OF THE
STADIUM
COMPLEX

B

O

C

A

SISHU PARK

SISHU ACADEMY

SILPOKOLA ACADEMY

UDDYAN AND ZOO

LONG TENNIS COMPLEX

POLICE LINE SCHOOL

TABLE TENNNICCOMPLEX

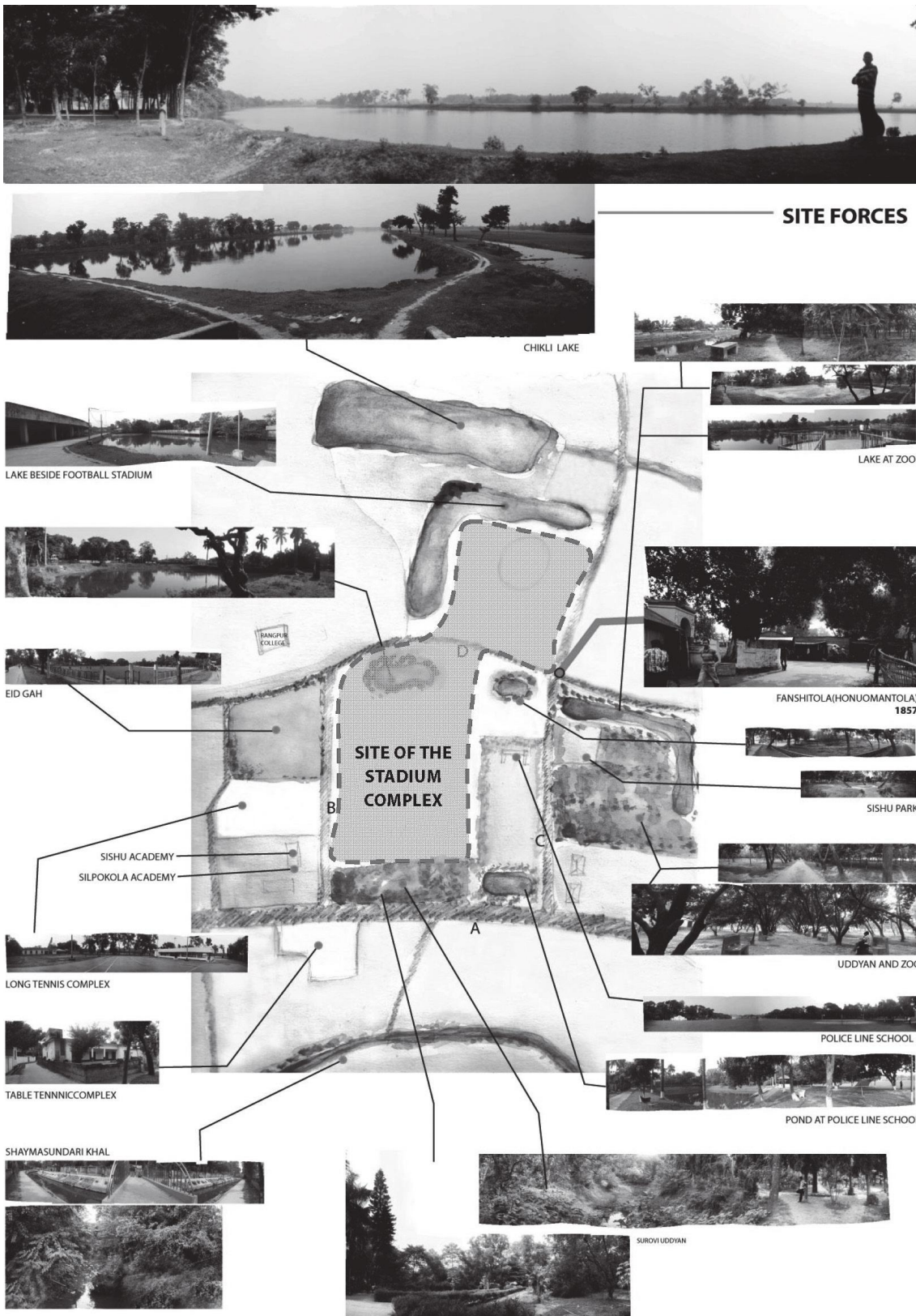POND AT POLICE LINE SCHOOL

SHAYMASUNDARI KHAL

SUROVI UDDYAN

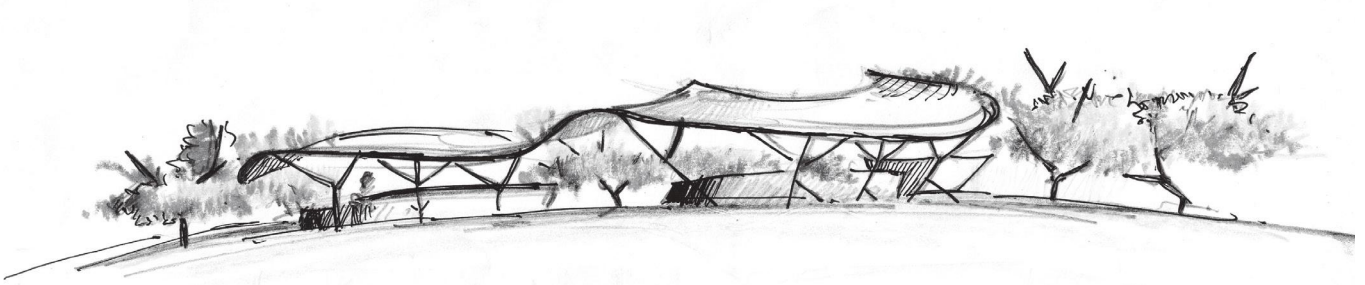FIGURE 3 Identifying the "Recreational Hub" around the site

FIGURE 4 Conceptual sketch of structure of the stadium inspired by the landscape

SITE ANALYSIS OF THE STADIUM COMPLEX

There is a proposal to design an international cricket stadium at the Cricket Garden. So, the public open spaces within walking distances from Cricket Garden are identified for considering the urban integration issue while designing the stadium complex so that it works as an urban gathering space all the year around. The master plan of the complex is designed in such a way that it creates connections with these surrounding open spaces. People will have the choice to walk all around and enjoy the natural resources and the total area will work then as a recreational hub.

On the east of the stadium complex, there is Rangpur Zoo with a beautiful lake, a large scaled Botanical garden and a children's park inside its arena. On the west, there are a large Eid Gah (where Muslim people perform their prayer on Eid day), Children's Academy, Cultural Academy, Long Tennis complex, and so on. On the north, there are two beautiful large lakes names Chiklee Lake and Kukrul Lake, which offer majestic beauty to the area. There is also a pond within the site of the stadium complex. On the south, there is a highly rich Botanical garden names as "Shurovi Uddan" which has some water canals within its area [**FIGURE 3**].

CONCEPT DEVELOPING FROM SITE AND SURROUNDINGS

Various aspects define a successful stadium landscape. Firstly, circulation, functionality, and key activities being defined and coordinated from the outset; secondly, responsiveness and sensitivity to landscape context and neighborhood; thirdly, offering something back to the surrounding community outside of game time, providing an aesthetically appealing stadium and opening up the site for community use and enjoyment where possible. Flexibility of use, which

ensures the use of the area not only during the major event times only but also all the year round, is also one of the major concerns for such master planning.

Overall, the aim is to propose a modern, multi-purpose stadium complex providing 40,000 seats for the international cricket events inspired from the landscape of Rangpur and also create the scopes of recreational facility for the local community while creating a modern sporting venue.

The design is developed on the theme of "Creating the Park," defining the stadium as a pavilion within the revitalized urban park.

Long-term planning has been done to develop and establish the relationship with the nature. Various considerations have been created to blend the mega-structure with the site and surrounding. There are proposals at two levels:

· macro level: creating connections with the surrounding large-scale public open spaces,
· micro level: creating various considerations to preserve the natural resources within the site and surroundings.

CONNECTIONS AT MACRO LEVEL:

A tree-lined pedestrian access way has been proposed for the Rangpur Zoo (at the east) and Long Tennis Complex (at the west). Some considerations have been made to connect with the other large scaled public open spaces.

Preserving the existing "Shurovi Uddan" (Botanical garden) There is a botanical garden named, "Shurovi Uddan" at the front of the Cricket Garden. There was a local proposal to build the entry to the stadium complex from the main road, which will completely destroy the Botanical Garden. But the author has proposed the entry in a different way. Two angular entries have been proposed from the main
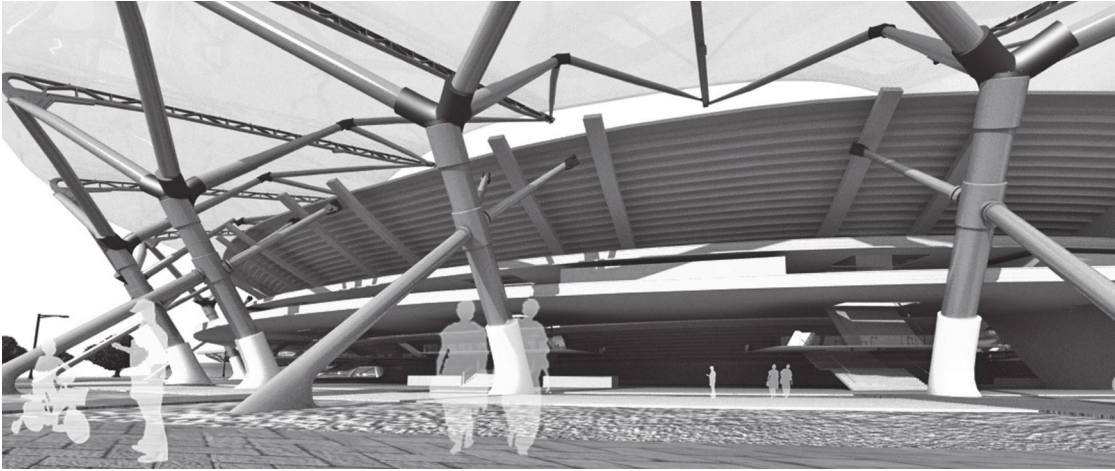
FIGURE 5 Structure of the stadium inspired by the landscape

the road, which will create pedestrian access to the complex as well as preserve the Botanical Garden. It will also offer the opportunity to the spectators to enjoy the green lashes of the garden.

Exploring the lakes A boat-riding facility has been proposed to the extension of the Chiklee lake, which will provide the scope to explore beauty the water bodies.

Pedestrian Sports Complex There is an existing Football complex at the north of the Cricket Garden. There is a narrow light-traffic vehicular road between the two sites of stadiums. Author has proposed that it should be pedestrian sports complex with both the stadiums. The landscaping and roof of the stadium is designed to integrate these two stadiums within one complex.

Connections at Micro Level Now, various design solutions have been delivered to blend the mega-structure with the site so that this area can work as an arena of festivization all the year round. Landscape is an integral part of the arena. Various scopes have been created to inspire the production of local crafts and arts, which will also be a source of income generation of the local people. Thus the master plan also offers the scope of cultural landscape.

Mega-Structure Blending with the Nature The mega structure is conceptualized as a part of the nature. The entry pathway offers a journey through the nature by preserving existing large trees and water body.

Preserving the trees on the east There is a secondary school on the east side of the site. There are full-grown

mature green trees on the boundary that have been growing there for many years. The branches of the trees are wide and provide a habitat for many birds. Therefore, the roof of the east gallery of the stadium is designed in such a way as to preserve the trees. People can enjoy the game sitting in the shade of the tree. The canopies of the retained trees however obscure portions of the mid-section of the east stand as will, eventually, the newly planted trees, which will help to diminish its scale.

Preserving the pond within the site There is an existing pond within the site. The local administration wanted to fill up that with soil to have more land. But author suggested to retain it and proposed a walking trail along side the pond so that people can enjoy the cool breezes of the water. The roof of the structure is designed to carry the rainwater to this retention pond for rainwater harvesting.

Access within the playground There is large playground on the east of the site. A pedestrian entry has been proposed from the Zoo Road, which will connect this area to the Rangpur Zoo and also with the large school field.

Designing walkway within the natural setting A walkway is designed along with the existing trees and water bodies. Many souvenir shops are designed by the side of the path. This also creates a scope of regeneration of local retail areas, which, in turn, will help to change the resident's perception of the stadium. The residents will become some of the stadium's biggest supporters and the stadium will become a positive part of the wider environment, a good neighbor.
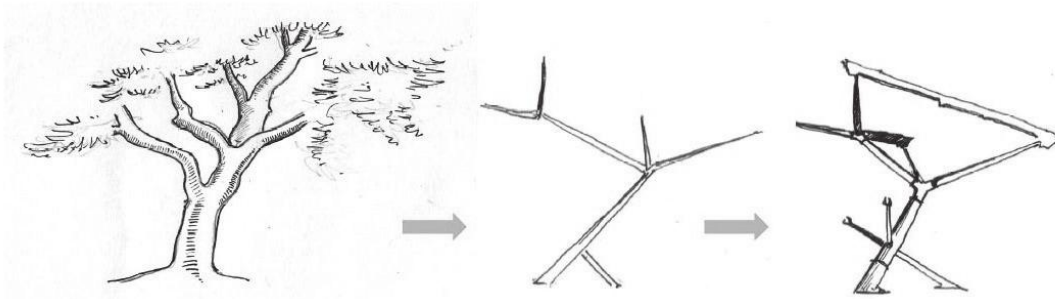
FIGURE 6 Structural evolution of the stadium

Preserving the EidGah (Field) There is an Eidgah (large field) on the west of the complex, which is proposed as the parking space during the international sports events. As there are very few cars in this city and paved parking is not needed all the year round. Therefore, the plan is to preserve its natural condition. It will then work as a public urban open space for the people of all ages. It can be used as playground, EidGah, festivals and fairs, and so on

Designing the structure from the inspiration of trees
The stadium is designed within a recreational hub with lots of trees around. There is a great number of large trees along the walkways, in the botanical garden, and also adjacent to the site. The megastructure has to be blended with this natural setting. Hence, the structures of the stadium have been generated from the form of the existing trees around [**FIGURE 4 + 6**].
Above the canopy-tree like structure, the use of transparent ETFE cladding partially blends the top of the stands into the sky. This helps to minimize the perception of the change in scale. The ETFE cladding also lets light through the top section of the stadium structure reducing the effects of shadowing to the grounds [**FIGURE 5**].

Integration of mega-events spaces with the landscape
The transition in scale from the stadium to the residential streets was of critical importance. Generally, the role of the vegetation in this instance is not intended to act as screening, but also to facilitate a transition in scale from the residential properties towards the stadium. The vegetated buffer that runs along the pedestrian road does not attempt to fully screen the stadium rather it aims to provide an informal "colonnaded arbor" effect at pedestrian level, with

the filtered views from the public footpath through to the park revealing a layered banding of vegetation and trees within the park. A solid screen of vegetation would have countered the intention of opening up the boundaries of the site [**FIGURE 7**].

CONCLUDING REMARKS
The architecture and landscape should have the same language conceptually, functionally, and aesthetically. One of the most interesting challenges of this project is to blend the stadium into the natural setting of the site so that whole stadium complex acts as one integrated system. The landscape, stadium, and surrounding spaces have to interact quite closely. Various steps have been taken to integrate the international cricket stadium within the landscape of the site. All the natural features like water bodies, park, green area, fields, and so on are preserved.
Urban strategies should be taken to improve the connectivity within the public open spaces of the master plan. It will improve the economic, social, and environmental condition of the area. The land value will be increased along with land use viability. It will also increase the scope of rental income and thus the economy of this area will be developed. In addition to increased accessibility, social interaction, and control, the overall social condition of the society can also be improved. The master plan of Rangpur City Corporation has the full potentiality to be developed in future as a wellbalanced area with both built-up areas and public open spaces. So, the use of the central Recreational Hub of Rangpur City Corporation should be improved by implementing urban intervention strategies to integrate the other open spaces with the city grid. Further studies and analysis have to be done for the comprehensive planning proposal of Rangpur City Corporation.

FIGURE 7 Integration of mega-events spaces with the landscape

ACKNOWLEDGMENTS

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PERCEIVED USE OF GREEN URBAN PARKS: USERS' ASSESSMENT OF FIVE CASE STUDIES

FREDERICO MEIRELES RODRIGUES

University of Trás-os-Montes and Alto Douro, Landscape Architecture, Portugal
fmeireles@utad.pt

Frederico Meireles Rodrigues is a landscape architect, member of the Portuguese Association of Landscape Architects (APAP), who teaches landscape design at UTAD (Vila Real, Portugal) since 2001. He is also a research in the CITAB Research Centre. Currently he is researching in the field of urban green park evaluation and critique, and alternative urban green spaces and recreation. He has also been involved in professional practice, cooperating with several private offices and in the UTAD Projects Department. He is a member of the Executive Committee of ECLAS since 2009.

PAULO FARINHA MARQUES

University of Porto, Department of Geosciences, Environment and Spatial Plannings, Portugal
pfmarque@fc.up.pt

SIMON BELL

Edinburgh College of Art, United Kingdom
s.bell@ed.ac.uk

EVA SILVEIRINHA DE OLIVEIRA

OPENspace Reseach Centre, United Kingdom; eva.silv@ed.ac.uk

urban green parks / polis program /
case-study / post-occupancy evaluation

INTRODUCTION

Parks, as well as other urban open spaces, are considered objects of urban regeneration but are also tangible entities, which are used and owned by the public. The globalization of design and design models are the subject of an ever-growing discussion. There are many views about contemporary park design, but two in particular emerge as specifically contrasting.

On one hand, the park as a metaphor of the city (Geuze 1993), as a cultural, artistic example of "physical-architectural fashion" (Shaffer 2006, 21) that extends the urban form and it is a means to indulge our insistent need to discover community life (Kostof 1992). It is the "experimental site for current garden art" (Shaffer 2006, 29) and the horticulture of beauty, rather than a naturalistic urban vision (Worpole 2000). On the other hand, the park is seen as a representation of nature (Koh 1982), which functions as a counterpart to the "dark side." The sustainable park is well integrated in the urban fabric yet evokes a new and more ecological aesthetic (Cranz and Boland 2004). It reclaims natural systems for the city, connects the bits and pieces of outdoor space,
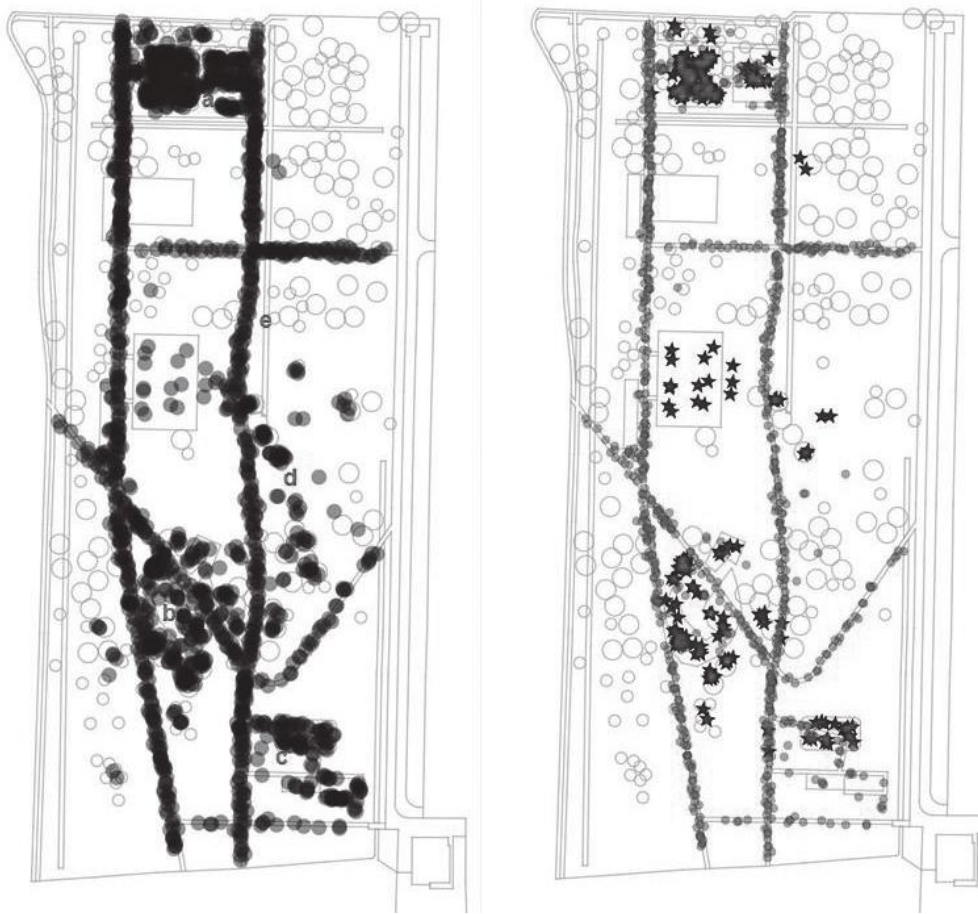
promotes well-being, ecological integrity, construction and maintenance cost adaptation, as well as the mitigation of a wide range of negative impacts on city life and environment (Tate 2001). Moreover, it accentuates the need for a biodiversity-based strategy, able to deal with a creative and sensitive management of parks as green urban spaces (Farinha-Marques 2006). Ultimately, the park is the place designed by nature and time, the loose-fit environment where the absence of formal design keeps the space available to a dynamic allocation of various uses (Ward Thompson 2002). David Louwerse (1993) stresses these two park concepts when focusing on the relationship between architecture and the urban park: on one hand the park as an "unroofed building," and on the other the suburban park, where there is more space available, and so the opportunity to present a more naturalized vision. If the first is constrained by the architecture and the city form, the second brings up the challenge to adapt nature to the needs of a dense urban life. Parks are landscapes and hence dynamic, which makes the aspect of change one of their inherent qualities (Antrop 2005). If parks are being designed, managed, and used by people at a certain time, political reality can also be one the causes of the transformation (Ward Thompson 2002). Although sometimes denied as an "ideological battlefield" (Shaffer 2006, 29), Catharine Ward Thompson (2002) discusses park

design by looking at it from two democratic perspectives. First, the park as "melting pot," which tends to absorb cultural differences and seek multifunctional design solutions (Ward Thompson 2002), while becoming an informal space that accommodates free use (Pardal 2006). Alternatively the park can be seen as a "salad bowl," where cultural differences can find their individual expression, attending to everyone's needs, becoming perhaps more intensively designed, but, Hans Ophuis (2002, 9) stresses, safeguarding "the overlapping and interchange of different social realms." Despite that, Bernard Huet (1993), using La Villete as an example, rejects the "plug-in park" (1993, 20), that is, a place that aggregates specific functions for everybody and anything, with no integrity. It is a problem to be solved by design, which should then recognize "the need of all individuals to distinguish themselves as well as be surprised and amused by others and, not least, by the design of the place itself" (Ophuis 2002, 9). The creation of a series of new green urban parks in Portugal between 2000 and 2010 went through an intense phase under a large-scale government program, which was modeled mostly upon the successful case of Lisbon's International Exhibition of 1998 (Correia Guedes, Pinheiro and Manuel Alves 2009; Partidário and Nunes Correia 2004; MAOT 2000). The Polis Program was designed to assist the environmental regeneration of a number of cities. Medium and small cities

were able to access funding, which they could use to generate new recreation and leisure opportunities. This growth however was not concurrent with the development and implementation of evaluation strategies seeking to understand its impact on urban environmental quality and, ultimately, on people's quality of life. In fact, field observations in parks, conducted by the authors for the past twelve years, suggest that most parks in Portugal are generally expensive and intensively designed, following contemporary architectural trends and quickly resulting in neglected sites that do not seem to respond sufficiently to the users' needs and expectations (Farinha-Marques 2006; Meireles-Rodrigues 2007). One of the main motivations of this study was to confront those assumptions with the actual pattern of park use and the users' evaluations of the Polis parks. Previous evaluations of the results and outcomes were focused mainly on the program's governance as well as planning and environmental issues. Apart from some descriptive analysis and visual quality assessment of Polis parks, there was a lack of scientific research into the way these new parks met their goals, and almost none in the field of users' and post-occupancy evaluation (POE).

RESEARCH QUESTIONS AND METHODOLOGY

An evaluation as constructive-deductive research strategy can be used to assess existing landscape conditions and to assess the success of programs, plans, designs and management actions (Swaffield and Deming 2011). As developed by Arnold Friedman, Craig Zimring and Ervin Zube (1978), it has proved to be valuable as a feedback mechanism for practice and teaching, to support decision making, to create and improve places, assessing users' needs and preferences and improving efficiency and value of money. William Theobald (1979, 61) emphasizes the idea that evaluation is also a means to learn from good practices and mistakes, proposing that evaluation should be "viewed as a process to improve rather than prove or disprove." As an example, we would argue that Bryant Park in New York, a redesign of a derelict site in the beginning of the 90s and described by William H. Whyte (Tate 2001) as "the territory of dope dealers and smugglers," has become a very pleasant park. A post-occupancy evaluation (Goličnik and Ward Thompson 2010;

Marcus and Francis 1997, Moore and Cosco 2010; Nager and Wentworth 1978) is a multi-method approach to the evaluation of a built environment, consisting of the appreciation of its performance. Clare Cooper Marcus and Carolyn Francis (1998, 345) explain it as "a systematic evaluation of a designed and occupied setting from the perspective of those who use it." It has been used to evaluate different issues and types of open spaces and frequently includes methods of observation and behavior mapping, surveys, and interviews. This paper aims to look at the results of a post-occupancy evaluation (POE) of five green urban parks, in order to explore common broader lessons about the Portuguese particularities of park use, preferences and needs. The study that led to this paper is part of a wider doctoral research on the evaluation of contemporary green urban parks in Portugal, explored from the points of view of experts and users. It addresses the following questions, considering a selection of Portuguese green urban parks, created under the Polis Program: how are parks being used? Are they successful from the users' point-of-view?

In order to obtain valid data for a user-led approach on Polis parks evaluation, a selection of five case-studies allow a focus on the particularities of an individual park yet retains the possibility to look at emerging broader patterns (Yin 1994; Francis 1999/ 2003; Loures 2011). An early phase of profiling the Polis parks led to that selection, from an list of thirty-one green spaces produced after consultation with the twenty-eight municipalities which were funded by the first stage of the Polis program. The selected parks are inside the urban perimeter, allow free public access, and range in size from eight to twenty hectares. The selection also represents the wide geographical cover of the program. A POE was carried out on this sample to test users' preferences, needs and satisfaction levels. This examination incorporated methods of observation of use, activity and behaviour mapping, and on-site structured interviews.

The observations and behaviour mapping were conducted during spring and summer 2011. The fieldwork was organized by sets of three observation sessions for each of four periods of the day (morning, noon, afternoon and evening). This resulted in twelve sessions per park and, at least, one round per session, depending on users' frequency and

recording speed. In total twelve to twenty-seven rounds of eighteen to twenty-five minutes were carried out in each of the five parks. The data recording system was developed under this research and makes use of a Asus *multitouch PC T91MT*™ to operate the geographic information generated in *QuantumGIS*™ software. The input of data is facilitated by a user interface form, developed in the Qt designerTM programming application. The computer allows operating in tablet mode, using a pen, and has proved to be very quick and more reliable than the conventional paper-based system. A total of 4,797 users were mapped and profiled according to their gender and age group, social interaction, level of activity and type of behavior.

The on-site interviews were conducted between summer and autumn 2012. There were both closed and open questions organized into three blocks. The first block was intended to differentiate the pattern of use of the park by the respondent, the second block on the users' evaluation and the third collected demographic information of the respondent. The data collection was carried out both on a paper form and on a map. The form was designed to record text answers, such like the answer to "What are your two main reasons for visiting this park?" A map under an acrylic cover, was developed in order to record geo-referenced answers to questions such as "Which place in the park do you like the most?" or "Which route do you usually take inside the park?" 351 interviews were conducted, which vary from 60 to 70 per park. A quota by gender and age-group was pre-defined, taking in consideration the results from the behaviour mapping [**FIGURE 2**].

SYNTHESIS AND FINAL COMMENTS

Preliminary findings show that users find the sampled parks to be pleasant and attractive in general, yet, many negative aspects emerge. Generally, users point out the lack of trees and shade, the lack of care, the excess of constructed elements and car parking areas, and unfinished places as the main negative aspects of the parks. Conversely, playgrounds, circular pathways, and shady settings seem greatly appreciated. Overall, users tend to be more critical about maintenance and safety issues, finding them more important than the visual qualities and the park's response to their own as well as society's needs. Even so, their suggestions towards the improvement of the
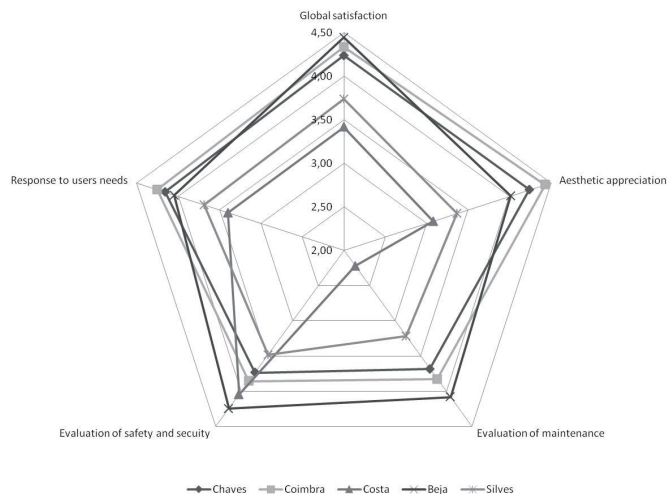

FIGURE 2 Chart of the user's evaluation using a likert scale (1-5), considering global satisfaction levels, aesthetic appreciation, evaluation of the maintenance and care, evaluation of safety and security, and the response to the respondent needs.

park seem to point mostly to aspects related to the usability. Corraliza (2000) argues that, in many Mediterranean countries, promenades and streets are meeting points and support social interaction. This fact appears to deny the role of parks, but it actually supports the results obtained from the observations and interviews, placing the pathway routes (especially when forming circuits) as one of most preferred element of park use. It showed also that there is quite a high level of social interaction along these routes, that is, walking is not purely a solitary activity. The same happens with playgrounds, which show high levels of social interaction among both children and parents.

The majority of the park users are essentially involved in physical activity, which is consistent with the fact that the most occupied areas in the park are playgrounds and pathways. In St. António Park in Costa da Caparaica [**FIGURE 1**], for example, the shady pinewood playground is clearly a favorite spot, despite the tempting playthings present in the other sunny playgrounds. The presence of trees and shade seem to be a great value of the parks.

Parks with river banks were also very popular for active and passive recreation among the survey participants. Even

the water banks are a place of social interaction rather than solitary contemplation. The sitting areas, especially when they are exposed to the sun, are less popular than areas near the water, where there are more opportunities to encounter other people.

Water, green, and shade emerged as the most relevant and specific areas of popularity, which ultimately helped park designers create better parks. The contact with water and its contemplation, plus the need for a cooler and thermally comfortable outdoor environment, are two of the most commonly pursued characteristics, which has perhaps been evident throughout the history of garden art in places with arid or Mediterranean climates.

Open lawns and meadows showed low usage. The sedentary users seem to prefer the sitting areas by the water, under the trees, which provide appealing shades, or those by the pathways. These results differ from Barbara Goličnik and Ward Thompson's (2010) who have applied similar methods to parks in Edinburgh and Ljubljana finding that the sedentary and passive use of the open meadows is otherwise very significant, concluding that it occurs especially when a certain "edge-effect" (idem, 45) accommodates users in this areas. The Portuguese hot summer is a major reason why the park's meadows are less popular, yet this is not true if there are trees and shade. Despite these survey results, and regardless of whether the lawns are entirely exposed or provide enough shade, they are still highly popular and users generally identified them as a main priority to improve the park. Mature sparse woods in transition, partially covering the clearings, seem to be the best combination in order to maximize multifunctionality and recreation in the meadow areas, while still preserving enough open land to respond to prospect needs, which evokes Jay Appleton's (1975) theory of Prospect-Refuge.

These assumptions of the scattered woodland recall psycho-evolutionary theories, such as the Habitat theory and the savannah hypothesis (Orians and Heerwagen 1992/1993; Balling and Falk 1982; Orians 1980), which suggest that people favor savannah-like landscapes. These claim that since humans have lived most of their evolutionary time in the African eastern-savannah, we retain the memories of these preferred environments, an intrinsic predisposition to favor these models of landscape (Balling and Falk 1982) that affect our biological and emotional well-being (Ulrich 1983/1986). From the enclosures and deer parks to the Arcadian and pastoral landscapes, styles shifted from the aristocratic formality of beauty, to park systems and recreation planning, and finally to the contemporary views. Whether aligned with the city form or seeking nature as inspiration, functionally homogeneous or individually inclusive, the park should perhaps be the beautiful place of freedom, recreation and restoration, grounded in local realities, cultural and ecologically-oriented, open to the city and to everyone.

This is an exploratory study and thus it requires development. Further analysis of the data and the particularities for each of the parks as well as additional fields of research, such as expert evaluation, will allow a more in-depth tracing of the qualities of the parks as well as the needs and preferences of users in Portugal, and also in developing a comparative analysis with findings from other similar research.

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OLYMPICS' ENVIRONMENTAL LEGACY: LONDON 2012, RIO 2016, TOKYO 2020: WILL THEY BE WORTHWHILE?

GÜLŞEN AYTAÇ
Istanbul Technical University,
Faculty of Architecture, Portugal
gulergu@gmail.com

Gulsen Aytac is an urban planner
and landscape architect and is asso-
ciate professor at Istanbul Technical
University, Faculty of Architecture,
Landscape Architecture Department.
Her PhD was about the Olympics Leg-
acies: the London 2012 and Istanbul
2020 cases. Research areas are urban
landscape design and planning. Land-
scape projects are Taksim Divan Hotel
Roof Garden, Bodrum Divan Hotel
Bakırkoy Urban Park, and Four Seasons
Bosphorous Hotel.

ROBERT HOLDEN
Landscape Architect, Turkey
RobertHolden13@aol.com

Robert Holden is a London-based
landscape architect. Research interests
include sustainability, post-industrial
landscapes, landscape construction,
the European landscape profession,
and aspects of eighteenth century
landscape gardening, especially the
ferme ornée. His next book (with
Jamie Liversedge) will be *Landscape
Architecture an Introduction (*Laurence
King 2014).

Olympiads / landscape / masterplan

LEGACY IDEAS AND THE OLYMPIC GAMES

Each Olympiad of the modern era has left a physical legacy,
beginning with the 1896 Olympics in Athens where the
Panathenaic Stadium remains in use. However, it was the
Barcelona Olympiad of 1992 which transformed the legacy
ambition of the Olympic Games, to one of transforming
a city. The Barcelona Olympiad led to redevelopment of the
harbor, and of 100 hectares of land in the center of the city.
Since 1992 there have been six summer Olympics, and pro-
mises of environmental legacy have played a part in all the
successful Olympic bid documents. Indeed Rule 2, Article
14 of the Olympic Charter determines that the International
Olympic Committee (IOC) should "promote a positive
legacy from the Olympic Games to the host cities and host
countries" (Olympic Charter 2011). Legacy is also covered
in the IOC bid briefing document *Olympic Legacy:* 2013.
In Atlanta in 1996, the 8.6-hectare Centennial Olympic Park
was in a run down industrial area. Two thousand trees
were planted in downtown Atlanta, the stadiums are still
in use today, and there were other open space improvements
made. But the ambition of this was small compared with
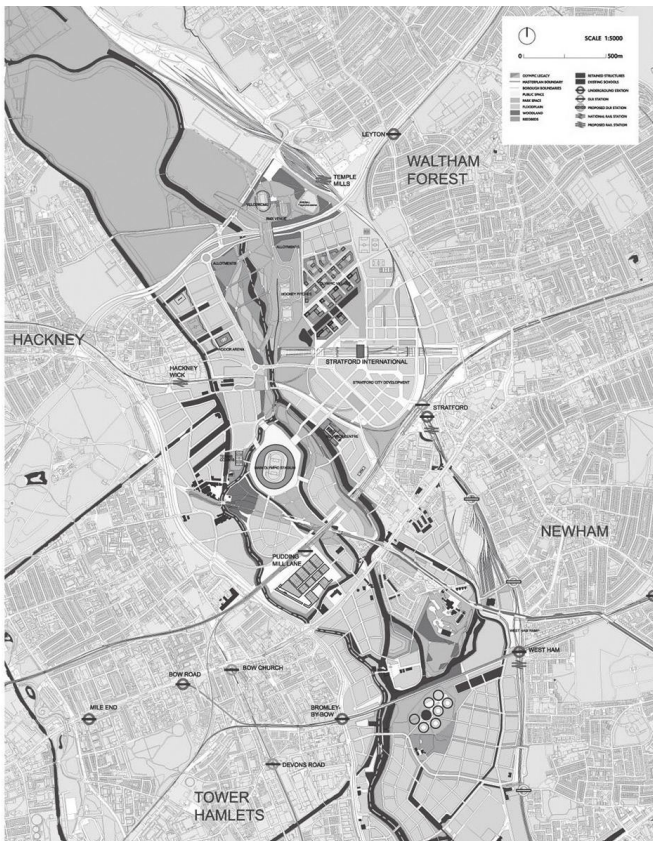Barcelona.

FIGURE 1 London 2012 Olympics legacy masterplan

FIGURE 2 London Legacy Development Corporation Queen Elizabeth Park 2030

Much more significant was Sydney 2000s 425 hectares of parkland, including 169 hectares of derelict land reclamation. The Sydney program extended to renewable energy and water conservation, such as wastewater recycling, use of sustainable materials, pollution control, and waste management. The stadiums remain in active use with 5,000 events held annually. The Sydney Olympic Park Authority manages the Olympic Park in Homebush Bay with twelve million visitors in 2012 to the park and sports facilities (SOPA 2012). The environmental legacy of the Sydney Olympiad is substantial. Since then there have been three further Olympics: Athens 2004, Beijing 2008 and London 2012. Athens 2004 got it wrong, many stadiums are now derelict, but the transport improvements remain: two metro lines, a tram system, and a suburban railway. The new international airport, Eleftherios Venizelos, has led to new areas of development for the city. (Business Insider 2012).

Beijing 2008 also improved public transport, built new facilities at its international airport, a new expressway and high-speed rail link to Tianjin, and three new underground railway lines were constructed. There were policies to control air pollution during the Games. But the environmental legacy was disappointing compared with Barcelona or Sydney. Beijing was a throw away Olympics; and, in 2013, it was often difficult to breathe in Beijing. The London 2012 bid document was legacy led. Ken Livingstone, Mayor of Greater London persuaded the Blair government to lead the bid with a strategy based on the rejuvenation of London's East End and centered on an Olympic Park on the River Lea in Stratford. This involved reclamation and cleaning of 300 hectares of contaminated industrial land and environmental targets for:

- ∞ carbon,
- ∞ water,
- ∞ waste materials
- ∞ biodiversity and ecology and
- ∞ land, air, water, and noise.

(London Olympic Development Authority 2007)

As well as reclaiming derelict land, the Games could only be traveled to via public transport; there was no road access to the venues for visitors [**FIGURE 1 + 2**].

LONDON 2012: WHAT LEGACY?

Facilities built for the 2012 Olympics and for which the future is now determined are:

New Neighborhoods 2,800 new homes were built in the athletes' village.
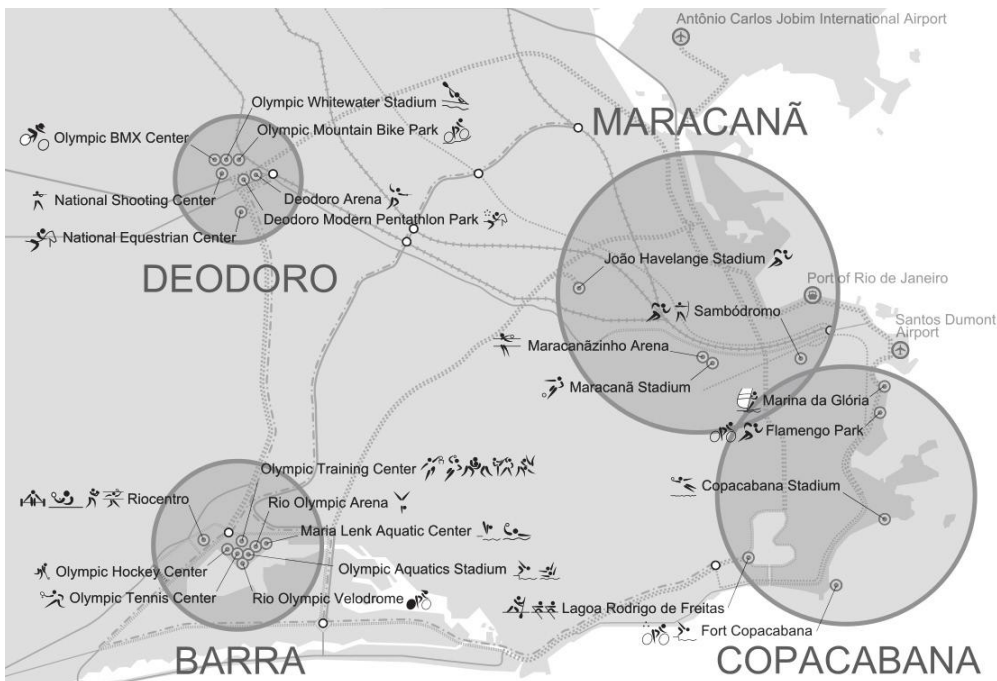
FIGURE 3 Rio 2016 Olympic venues map (source: http://en.wikipedia.org/wiki/File:
Rio_de_Janeiro_bid_venues_for_the_2016_Summer_Olympics.svg accessed 9.04.2014)

Transport The 2005 bid documented promised the "best connected most accessible place in Europe" (LOCOG bid document 2005). There are nine public transport railway lines feeding into Stratford station. However, Heathrow Airport is a seventy-minute journey from Stratford by train (change at St Pancras). Come 2019, when Crossrail opens, the journey time to Heathrow from Stratford will be forty-nine minutes. Nevertheless public transport connections are good and are getting better.

Venues and Sport The future of all of the eight permanent venues has already been secured (Aquatics Center, Orbit, Multi-Use Arena, Olympic Village, Velodrome, Eton Manor, the Stadium, and Press and Broadcast Center). The stadium is leased by West Ham football club and Newham Council and is to be reduced in capacity to 60,000. Athletics is to be retained so the running track will require retractable temporary seating for football matches and for soccer the capacity will be 54,000. This compares with the 110,000 capacity Olympic Stadium for Sydney 2000 reduced to roughly 83,000, but with no athletics (ref. ANZ Stadium 2013).

Green Space For London the figures show over 35 kilometers of interlinking pathways, waterways, and cycle paths, 102 hectares of open space, 6.5 kilometers of rivers and canals running through the Park, 45 hectares of wildlife habitat in the Olympic Park, with reedbeds, ponds, and woodlands. Currently the Olympic Park is being remodeled, but the first area reopened on July 27, 2013, and the remainder is to reopen in April 2014.

The Olympic Park, now called the Queen Elizabeth Olympic Park, is 102 hectares of open space. But to this may be added the reclamation of extensive derelict land and the access to the River Lea with riverside walks. In short, an extensive area of run down East London has been made suitable for development, the River Lee has been made accessible and there is every sign that there will be a long-term legacy, though smaller than Sydney (i.e. a 102-hectare park compared with 425 hectare of parkland in Sydney).

RIO DE JANEIRO 2016

The environmental aspects of Rio de Janeiro's Legacy (as opposed to the sport employment and skills development, etc. legacies) are described in the bid document as: Transformation of the city—the games will help herald a new era for Rio. A wide range of programs, funded by the government in support of the games, will provide the foundations for sustainable long-term development. These programs, many of them already under way, include:

FIGURE 4 Rio 2016 Aecom Masterplan Barra

- better air quality through stronger emissions controls for industry and mass transport,
- enhanced public transport through the development of the High Performance transport Ring,
- extensively improved security, including new skills and systems,
- preservation of the largest urban forest in the world, including the planting of twenty-four million trees by 2016
- significant regeneration projects, such as:
  - the transformation of the Port area into a major accommodation, entertainment and tourist district, reconnecting the harbor to the heart of the city
  - new housing, retail and leisure outlets in the Maracanã and Deodoro zones
  - extensive sport, recreation, transport and other infrastructure developments in Barra
  - the Park Precinct in Deodoro, the area with the largest percentage of young people, offering a wide range of sport and recreation facilities.
- housing: the four legacy villages will provide new apartments (more than 24,000 rooms) around games locations (Rio 2016 Candidate City 2005) **[FIGURE 3]**.

The "largest urban forest in the world" is Parc Naturel Tijuca, 3,200 hectares and made a National Park in 1961. But read the Environmental Section this involves keeping what is already there. Only the Park Precinct in Deodoro suggests anything in terms of open space environmental improvement, but it is not new it was developed for the 2007 Pan-American Games of Rio. The 121 hectares Olympic Park in Barra with a masterplan by AECOM is simply a number of stadiums stacked in a triangle with a wiggly central spine leading to the sea. It will be redeveloped after the Olympics. Rio is disappointing in terms of extensive derelict land reclamation or new parks. The main new environmental initiative is the historic Maracanã Zone, including the Maracanã Stadium and Sambódromo. The Port of Rio is also located in this zone. The Rio 2016 plan focuses on urban interventions around the key games facilities, including a major redevelopment of the Port area **[FIGURE 4]**. Compared with Barcelona, Sydney, and London: Rio appears disappointing. But there is the opportunity for revitalization of the Port of Rio.

OLYMPICS 2020 BIDS BY ISTANBUL, MADRID AND TOKYO

There are currently three bids for the 2020 Games: Istanbul, Madrid and Tokyo. The decision is to be voted on by the IOC on September 7, 2013. Of the European bids that by Istanbul is significant in terms of environmental legacy. The Istanbul bid document offers:

- Reclamation of land and historical preservation
- restoration of … derelict land, including quarries, for recreational and sports purposes,
- re-establishing natural habitats in the river valleys, creating 625 hectares of green space and reactivating a further 240 hectares, while
- restoring and preserving more than 16 neglected historical sites.
- *Climate and clean energy*
- The Olympic City will become the model of climate-adapted, low energy housing and construction as the result of collaboration between the TOKI Games directorate and the Ministry of Environment and Urban Planning.
- an Olympic energy and climate learning center will be established as part of the Olympic City legacy and
- tree planting will contribute to making the Games carbon neutral.
- *Clean water and public access*
- Key initiatives will include reclamation of shore lands for recreation, swimming, green space, and freshwater conservation.

In addition, large-scale improvements in public transport are promised (Istanbul 2020 Applicant City, 2012). Istanbul has been a repeated previous bidder, and its bid budget is $19.2 billion for related urban improvements, including 265 kilometers of metro lines, a third bridge over the Bosphorus, and the Marmaray Project railway linking Europe and Asia by tunnel. This dwarfs Tokyo's $4.9 billion and Madrid's $1.9 billion 2020 bid budgets (Guardian 2013). The reservation is whether the obsession with "hard" engineering in Istanbul is not backed up by concern for "soft" green engineering, e.g., air pollution, carbon, ecological footprint, and real environmental gain. Istanbul's population was 13,854 million in 2012 and is growing (Türkiye İstatistik Kurumu Matbaası, 2012). A successful bid could have led to the transformation of Istanbul. In fact, perhaps due to the Gezir Park demonstrations in 2013 and concerns about Turkish athletes taking drugs, Tokyo won the 2020 Olympics bid.

LESSONS FOR THE FUTURE

The International Olympic Committee requires a commitment to environmental legacy. Since Barcelona this opportunity has been realized at Sydney and in London, and been throw away Games in Athens and Beijing. Environmental legacy is not promised in Rio de Janeiro in any but a superficial way, except in the old port. The opportunities for Istanbul, if it had won, were great, but the challenges were also very great. As it happened Tokyo won for 2020 with a repeat bid. Bids from Paris for 2024 (the centenary of the 1924 Games) or 2028 could build on the examples set by Barcelona, Sydney and London (Le Monde 2013). Or maybe Istanbul can bid yet again?

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PECHA KUCHA

Pecha Kucha: (Japanese: ペチャクチャ, chit-chat) is a presentation style in which twenty slides are shown for twenty seconds each—six minutes and forty seconds in total.

RIVERSIDE—THE SENNE UNDER BRUSSELS APPROACHED THROUGH PRIVATE CELLARS

Rebekka Seubert

The University Of Fine Arts of Hamburg (HfbK)
Department of Graphic art/Typography/Photography
rebekka.seubert@gmail.com

Brussels / Senne / river / underground / cellar

Private cellar under Brussels, Photo excerpt from the series "sur Senne." (Photo by Rebekka Seubert)

This project starts in Brussels: around 1870 the mayor of Brussels decided to radically change the urban structure in order to gain space for modernization. Therefore, until today, the Senne River runs underground. It vanishes just before the central station and turns up again in the cities' outskirts. I was obsessed by the idea of having a floating element under the streams of a city, running under streets, beneath houses and their basements. For this project I rang all the doorbells of a riverside-street to ask whether I could take photos of the inhabitants' cellars.

But instead of seeing the river, you see the things that people don't want in their flats, the past, the things they want to hide underground. Somehow like the river itself.

THE ARCHITECTURE OF TRANSIT: PHOTOGRAPHING BEAUTY AND SUBLIMITY IN MOTORWAY ARCHITECTURE FROM THE ALPS TO NAPLES

Sue Barr

Royal College of Art, London
www.architectureoftransit.com

photography

Isola del Cantone, Geneva. (Photo by Sue Barr)

I am a photographer and completing a PhD by practice at the Royal College of Art in London.

My research project aims through the use of a digital plate camera to make large-scale photographs that represent sites of beauty and sublimity in motorway architecture.

Motorways are not generally understood to be architecture and are mainly ignored within architectural discourse. My project seeks to re-establish road structures as architecture in the landscape. Specifically, I consider motorways to be megastructures because the speed with which they are constructed gives them a unity of design and due to their enormous size, often traversing nations and international borders.

The field of study for this research project are motorways from the Alps and Naples. This area was chosen due to the combinations of extreme topography and urban conditions within this area that result in sites rich in moments where the architecture of roads transcends function to become poetic.

In addition these places have an aesthetic history in art and literature in which the experience of travel is a recurrent form of representation, with particular categories used for its expression like the sublime and the beautiful.

Coming from a background in commercial architectural photography, I have been frustrated by its dogmas and in particular the banal aesthetics of modern landscape photography. My project rejects this desaturated aesthetic in favor of practices that emphasize individual character analogous to that of the portrait where the subject is revealed and celebrated, where the role of the artist is to reveal the transcendence of the subject over its actuality through representation rather than record.

Digital photography is a new medium with a relation to chemical photography that is similar to the relation between painting and photography in the nineteenth Century. By adopting the digital equivalent of a Victorian plate camera and exploring the history and the aesthetics that informed

nineteenth-century topographic imagery, my practice has stepped into a different space encouraging me to experiment with a wide-ranging manipulation of the image from pre-imaging to post-production.

The resulting large-scale photographs are long considered and evolved images that embrace enhancement to overcome the limits and ideological presumptions of the notion of the photographic record and traditional relationships between text and illustration. The images are the text and in them are descriptions of the architectural conditions imagined so as to reveal the irrecordable subjective experience of them in situ.

My research project seeks to discover how the photograph can reveal sites of beauty and sublimity in motorway megastructures and represent our aesthetic experience of them.

WHO OWNS THE LANDSCAPE: THE LANDSCAPE MEAT EATERS

Benz Kotzen

University of Greenwich, Landscape Architecture,
United Kingdom
b.kotzen@gre.ac.uk

landscape sustainability / global warming
and meat production / landscape architects
and conscience
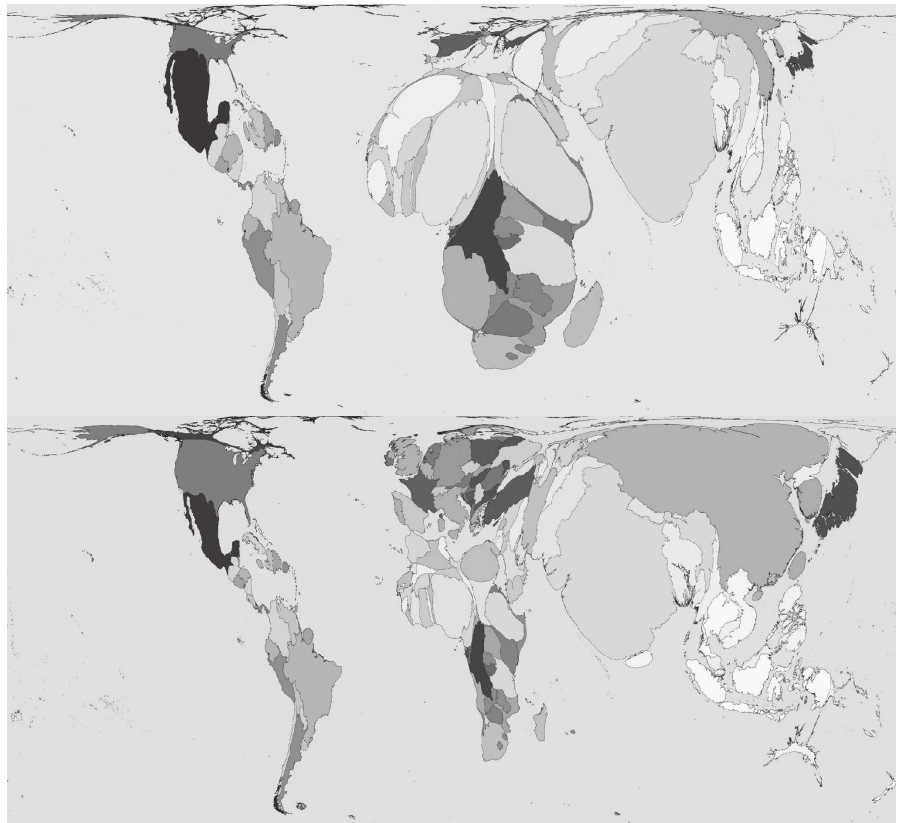
Deaths by Nutrient Defficiency and Total World Population for Comparison. (Images by Sasi Group, University of Sheffield and Mark Newman, University of Michigan)

Landscape architects like to see themselves as being sensitive to the environment and environmental issues. As landscape planners and designers, sustainability is high on the agenda of consideration. Landscape architects are the designers who may be considered the most holistic in their approach. Considering all aspects, conserving the world and making it a better place for man and nature. Many landscape architects would concur that global warming exists and that as a profession we must do something about it. More than this the profession agrees that we should be one of the groups that should be taking a lead in sustainable design, minimizing bad inputs and minimizing bad outputs, limiting CO_2 emissions, growing biomass for use in Combined Heat and Power Plants (CHP) to heat and provide electricity for our homes and businesses. Landscape architects are also at the cutting edge of greening roofs, living walls, designing and planning for a "greener" future, limiting the carbon footprint of clients' enterprises. It is strange then that most landscape architects then eat meat and that the benefits of doing good in terms of reducing our CO_2 emissions and creating more sustainable projects is undone. When it comes to designing "holistically" or with a conscience, landscape designer are personally convinced that they are doing good, but when it comes to the personal and critical choice of eating meat, then they just don't give a damn. This paper discusses the controversial subject of responsibility each person (each person and each landscape architect) has to reduce the effects of meat production on our planet. The paper discusses the effects of meat production and consumption on Europe and the world and attempts to identify why and where landscape architects are willing to countenance numerous important measures to combat global warming, but on the whole will not countenance the just as important decision on what and what not to eat. The "Zero Carbon Britain" document/project lead by Paul Allen at the Centre for Alternative Technology (CAT) notes that "strategic shifts will … need to be accompanied by behaviour and lifestyle changes by citizens, such as more walking and cycling and less meat consumption." The author of the Stern Review Report on the Economics of Climate Change states that "meat is a wasteful use of water and creates a lot of greenhouse gases. It puts enormous pressure on the world's resources." This paper thus takes the argument for holistic approaches to planning and design from the general to the personal. If landscape architects are serious about sustainability and being a part of the solution to global warming, then they need to think beyond their drawing boards and iPads, to what they and other people put in their stomachs. Responsibility and stewardship of the land start with the personal and not the general. It is not good enough to be just a "good landscape architect" and make "good landscapes," through a general conscience. Commitment to the world's position must be met on a much more personal level.

PAUSE AND THINK ON/OVER RUINS—COLLECTIVE APPROPRIATIONS AND LANDSCAPE PLANNING

Chiara Sonzogni
LÓFTE, Portugal
chiara.sonzogni@gmail.com

experimental / micro-urban plans / ruins / opportunity / quality

FREE TO SPEAK
AND EXPRESS

For a competitive landscape!

The object of this abstract is to present and illustrate a loss of balance in the system of urban landscapes, which is here perceived as a living being, made up by networks and symbiotic contradictions.

The decay sensed in the urban fabric calls out for explanations and solutions with the aim to provide a basis for a high-quality urban living. To do so a critical analysis of the existing situation is needed. Now is the time for changing approaches: large-scale land organization plans will need to go alongside with land management schemes to allocate resources and take micro-urban plans into account.

This need will become an opportunity to take care about small details and nuances; the decay itself may become, through re-interpretation, the potential solution— a blank paper available to anyone willing to intervene in the urban system, to draw the lines of change.

Portugal is experiencing urban landscape decay due to a large emigration which sees small and medium towns and major city centers abandoned. The need to curb this growing trend is to generate creativity in the most disadvantaged environments and to provide fertile grounds for debates. The cities of Oporto and Guimarães strategically experimented with spontaneous and temporary

use of small-scale abandoned places— simple interventions, which stimulated reflections upon the way to act on the urban landscape. Indeed, setting the basis for the town to get in touch with its fragile places, a debate opened on the importance of quality void spaces as an opportunity for the town to pause and think on the regenerative potential of its undefined being and its micro-intervention being collective and self-managed.

I intend to reflect on the permanent traces left by temporary interventions in the urban landscape and in the way of living in it.

I will present the results of the projects, realized in 2011/2012 in ruined spaces and decadent surroundings in the city of Porto, Aveiro and Guimarães, and their effects on the environment and on people involved.

In fact, caring about the damage to the urban fabric and revealing the fragility underlining its potential, you find out that the urban landscape is shaken by the sensitivity of the people who live in it. Simply offering a void place generated in a small surrounding of a few hundred meters fostered various single and collective reactions. This led to an important transformation: launching dynamics, which created meaning beyond being "good or bad." Furthermore this transformation manifested the towns needs and gave it the

courage to start a change from the bottom up. The city is a tailor made suit, made by the inhabitants themselves, therefore they need to receive the instruments to work on it. Hence the need to think the landscape, as both a need and an opportunity to understand and meet the demands of contemporary life interpreting it in a specific way will favor successful interventions, tailored for the town, the neighborhood or the street. Starting to live the urban landscape again, assessing it, instead of judging, is that the right approach to produce new quality? Is taking consciously care about the landscape a value? Is surgically intervening on the landscape, giving oxygen to the urban system, an environmentally friendly strategy? Is the present crisis of the town in Portugal an opportunity for redemption?

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CITIES ON HOLD/
URBAN CATASTROPHE
RE-THINKING URBAN LANDSCAPE
IN MADRID'S PERIPHERY AFTER THE
"CONSTRUCTION TSUNAMI"

Anna Laura Jeschke
UBERLAND, Spain; ljeschke@uberland.es
Ana Méndez de Andés Aldama
Universidad Europea Madrid UEM
malashierbas@gmail.com

**periphery / construction boom /
re-designing public space / urban tsunami /
urban catastrophe**

Landscape of Crisis, PAU de Vallecas, Madrid. (Photo by Anna Laura Jeschke)

At the peak of the construction boom in Spain about 760,000 new housing units were built a year. At that same time, the combined amount of new housing units built in England and France, together three times the population of Spain, rounded about 650,000 a year (Concheiro 2012, 24).

This "construction tsunami" (see Fernández Durán 2006) has changed radically the urban landscape of the Spanish capital. In the decade between 1993 and 2003 the land committed for urban development increased by 49%, half of the area Madrid had grown throughout its whole history. In these urban development areas, located in the city's periphery and defined by Programas de Actuación Urbanística—PAU (Programs of Urbanistic Action) about 200,000 housing units for almost 600,000 inhabitants were planned (Observatorio Metropolitano 2009, 53).

The burst of the Spanish speculative bubble in 2008 ended the rapid development of the areas designated for urban expansion. All that is left now are half-finished districts where the housing construction has suddenly stopped, with over-dimensioned streets and a poor public space, and a lack of urban infrastructure such as schools, sports facilities or health care centers (Herrero 2012, 55).

In our presentation we would like to introduce our theoretical and practical experiences in the PAU of Vallecas, one of the most ambitious urban development areas of the Spanish capital. It is situated in the devastated territory in the southeast of Madrid—currently a patchwork of residential clusters, illegal settlements, industrial developments and abandoned agricultural lands. We have visited the area in several occasions since 2010 and developed several projects such as: *urbanaccion 2010 SubUR|La Casa Encendida, Madrid*

Four workshops that intend to show four reflections on the outskirts of Madrid and extract and analyze four samples of peri-urban vacant spaces.

Global Design Studio 2011 | Viaje Interior a las Afueras | Universidad Europea Madrid

International workshop with landscape architecture and architecture students from the University of Natural Resources and Life Sciences Vienna and the Universidad Europea Madrid. The students were asked to envision different futures for the urban landscape and terrain vague of the study area, and to develop overall strategies and site-specific proposals.

We think it is necessary to treat these urban spaces with a different kind of criteria and to develop new design concepts, especially regarding the parks and other open spaces that are part of this kind of urban developments. First of all, we must start from another kind of perception and identification with its surrounding landscape and natural environment. But it is not only necessary to open the debate about the actual design of urban spaces. Most of all, we need to rethink the character of public spaces, consider the possibilities of a future construction and demographic developments in order to develop innovative and flexible models for the use and destination of the large voids that have been generated.

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ICE OR DUST—
THE LATVIAN ROAD LANDSCAPE

Kristine Vugule

Latvia University of Agriculture
Department of Architecture and Building
kristine.vugule@llu.lv

road landscape / seasonality /
gravel surfaced roads

The countryside road near Vecauce. (Photo by Kristine Vugule)

Seeing the landscape from a car or other means of transportation is an integral part of today's life. People travel all year round and see the landscape as they pass through it. Aesthetic and diverse views give extra value to the traveller's experience. Research on road landscape perception and design has been well developed in the USA since the nineteen-sixties (Appleyard, Lynch and Myer 1964). Evaluation of the current state of and proposals for road landscape development is a new field of research in Latvia. Latvian countryside roads are often gravel surfaced and in winter they tend to be covered in ice while the landscape is snowy, but in the summer the surfaces are loose and dusty. The conditions give special qualities to the experience and emphasize the deep rural nature of many Latvian landscapes attractive to tourists. The rural landscape is changing as a result of different factors (Bell et al. 2009) and the impression of the landscape may be negatively affected by sights like land abandonment, overgrowing bushes hiding features from view, forest cutting, derelict buildings, and untidiness. Thus it is important, at a time when tourism development has a priority, to see how the future management of the landscape within the visual range of roads actually or potentially used by tourists is perceived by drivers and passengers at different seasons and how this knowledge can be used in landscape management activities.

The main research objective was to examine the impact of seasonality and driving speed on landscape perception. A secondary aim was to test possibilities of video equipment for road landscape recording from a moving object such as a car and to test the method of road landscape analyses using videotaping as a means of capturing the dynamic experience. Research was carried out on rural roads close to Jelgava, Latvia. It consisted of field studies with videotaping and analyses of video materials. Landscape perception by a person travelling by car is influenced by driving speed and road geometry but visibility and the spatial configuration of views from the road can be influenced by seasonal differences. Seasonality has large impact on the Latvian roadside landscape due to specific differences throughout seasons. These differences should be taken into account in road landscape planning and management in particular for roads used by tourists. This research project is part of the first year of activities in my doctoral thesis on road landscape planning in Latvia.

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CANARYSECT—CAPTURING DYNAMICS, RELATIONSHIPS, ATMOSPHERES IN THE WATER LANDSCAPES OF THE CANARIES

Gini Lee

University of Melbourne

Elisabeth Murdoch Chair of Landscape Architecture

Australia

virginia.lee@unimelb.edu.au

Lisa Diedrich

Swedish University of Agricultural Sciences

Landscape Archicture, Sweden
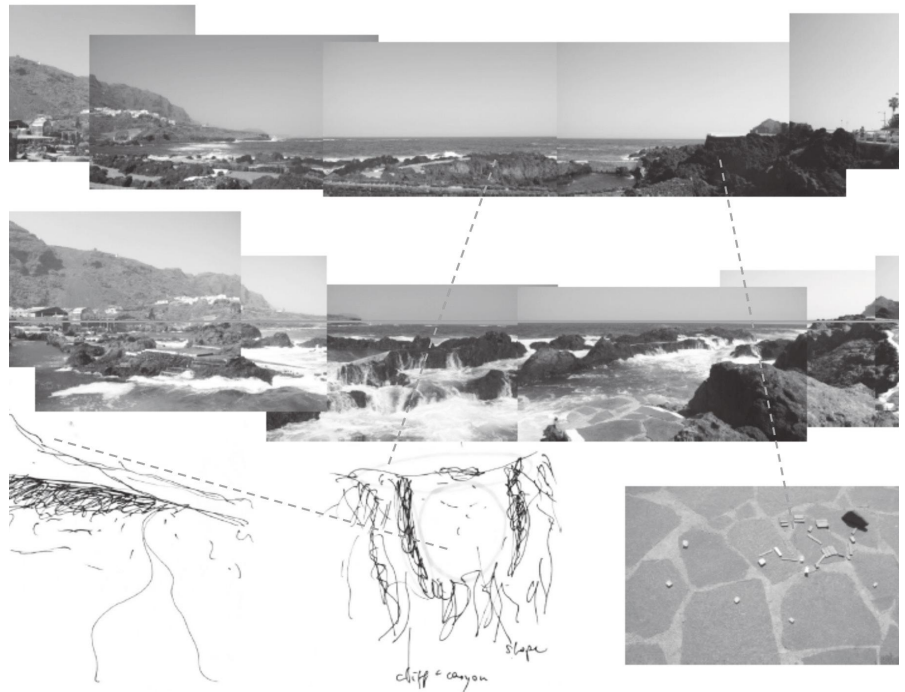
lisa.diedrich@slu.se

Ellen Braae

University of Copenhagen, Department of Geosciences and Natural Resource Management

embra@ign.ku.dk

site qualities / design tools / analytical tools / fieldwork / water landscapes

Canarysect: discovering the rocky coasts of Tenerife's Northern shores

Landscape architecture is basically a cultivation of open space, a dialogue with the present and complex relations of cultural and natural features on site. Regarding landscape architecture as transformation of something existing rather than pure invention *ex nihilo* emphasizes on-site analysis as an integrated part of the design process. However, landscape architectural design work with water landscapes has revealed that designers are lacking tools capable of capturing a site's ephemeral qualities, such as its dynamics, relationships, and atmospheres. These qualities correspond to the fields of natural sciences and to spatial aesthetic aspects. Inspired by Alexander von Humboldt's way of travelling and collecting information on site, we have conceived a fieldwork travel, the Canarysect, based on the exploration of the water landscapes of the Canary Islands as a frame for testing three well-known tools: the sketch, the photo and the model, and their ability to capture on site the dynamic, relational and atmospheric qualities we want to retrieve. The aim of these efforts is to improve contemporary ways of thinking about sites and to develop design research within landscape architecture.

Canarysect is a first on-site experiment during which we applied our design tools to a fieldwork excursion to the Canary Islands in April 2013. The Canaries archipelago presents an interesting empirical challenge, a perfect on-site laboratory, as it hosts a great variety of topographical and water conditions and respective sites over a compact geographical expanse. Importantly, the Canaries are a microcosm of the globalizing world, subject to economic, environmental and social change, and requiring adaptive design strategies which can be supported by site investigation and communication of their particular dynamic, relational, and atmospheric conditions.

Our fieldwork and collaborative findings formulate first insights into an experience-based methodology for the generation of site knowledge and a related epistemology. The ECLAS conference has served as a forum to enrich our insights in discussion with the design-oriented academic audience and now enables us to continue our enduring research commitment along further research into the embedded topics and further transect fieldwork. We are currently deepening our scholarship, sharpening theories and methods, specifying our language, transferring insight into design teaching, and planning to include a broader audience into an updated design discourse.

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MANGFALL PARK—INTENSIFIED LANDSCAPE OF STREAMS

Steffan Robel

A24 LANDSCHAFT, Germany

steffan.robel@a24-landschaft.de

water management / landscape of streams / atmosphere / bridges and boardwalks

Mangfallpark—a Park along rivers. (Photo by Hanns Joosten)

Mangfall Park combines sustainable water management with sublime design. The newly accessible landscape of streams transforms it into an urban park. Bridges, boardwalks, and flood protection dikes become key elements of the landscape.

Mangfall Park has become an engine for urban renewal in adjacent neighborhoods. It is frequently visited and has become a favorite recreation area close to the city center.

Mangfall Park in Rosenheim runs along the banks of the Inn and Mangfall rivers and the Hammerbach stream. It is the central urban development project for Rosenheim as a city situated on the Inn and Mangfall. The urban space between the Inn and the old city, previously dominated by commerce and industry, has been considerably invigorated through the transformation of the riverbanks to parkland.

Mangfall Park evolves out of the close interaction between landscape design and architecture. A system of landscape boardwalks divides the park into architectural elements. At the same time, these boardwalks connect the thin strips of land between the waterways to create a new and greater green space. The integration of the park into the wetlands between the Inn and the Mangfall results in diverse intersections with the riverbanks. Sometimes dramatic, sometimes subdued, they carve out the different qualities of these junctions of land and water. Because of the water's proximity, high requirements were put on engineering structures and flood protection. These requirements were included in the overall plan from the very beginning as an integral part of the design.

Rosenheim is traversed by numerous waterways. Before reaching the Inn, they combine into a parallel waterway system, resulting in a linear landscape. The aim of the design was to improve the link between the inner city and these linear waterways—the Inn and Mangfall rivers and the Hammerbach and Mühlbach streams—and to bring the river space to life.

To this end, the new park was given a backbone of three landscape boardwalks that cross the waterways and connect the city with the new parkland and the Inn River. The boardwalks, which are up to 190 meters long, transform the routes to the water into architectural landscapes. They function as promenades, ramps, bridges, viewpoints, seats and lounging areas all at once. The boardwalks allow one to go in new directions: Where people once strolled along the individual waterways, they can now crisscross the Mühlbach, Hammerbach, Mangfall dyke, Mangfall, Inn dike and Inn, one after the other. The crossings add new dimensions to visits along, at and on the waterways. They also negotiate the differences in height between the dykes and the flatland, enabling barrier-free access to the area.

The design that resulted from the successful competition entry in 2005 was implemented during the construction phase between 2007 and 2010. Rosenheim's new park was built on thirteen hectares and had a total budget of ten million euros.

Mangfall Park has enjoyed international publicity and received honorable mention for the 2011 German Landscape Architecture Prize; it was a finalist for Rosa Barba European Landscape Prize in 2012.

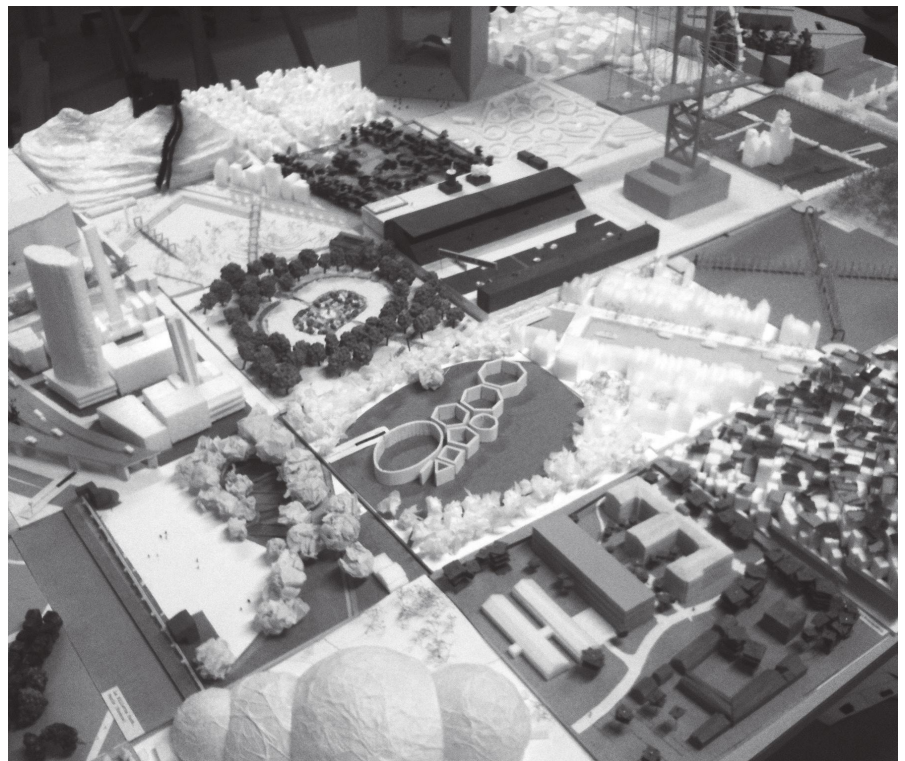## URBANISM STUDIO 2013: TWENTY WELFARE GARDENS. CAN THE ART OF GARDENS DEFINE THE FUTURE WELFARE CITY?

Mads Farsø

University of Copenhagen

Master Program Landscape Architecture, Denmark

madsfars@life.ku.dk

landscape architecture / garden history / urbanism / welfare city / design studio / the unexpected question

W1:500 Studio Models of Gardens and Urbanism. (Photo by Mads Farsoe)

Twenty Welfare Gardens is the result of the eight-week intense project design course Urbanism Studio at the Master program in Landscape Architecture at the University of Copenhagen (UC)

On the basis of the conceptual learning model developed through the previous held design studios All You Need Is Architecture (UC 2009), Supersuburban Robin Hood Gardens (AA London 2011), and Urbanism Studio (UC 2010–2012) a new way of exploring urbanism is presented in twenty project designs for five different sites in the south of Copenhagen. The studio addresses the value of garden history (Hunt 2004) and perspectives on everyday landscape (Jackson 1984; Hauxner 2002) in various medias (Koolhaas and Mau 1995; Stierli 2010; Girot and Truniger [eds.] 2012) to raise critical questions (BBC Banham 1972; Godard 1982) about what suburbia, welfare and city is to become (Sieverts 1997; Chemetoff 2009). Through a series of obstructions (Leth and von Trier 2003) students were asked to define a design

mindset and program on basis of their site's specific qualities.

The student design projects were later exhibited at the local municipal library and communicated to local inhabitants in newspaper-styled catalogue printed in 1,000 copies.

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LANDSCAPE CHOREOGRAPHY— FROM WASTED LAND TO SHARED SPACE

Maria Ippolita Nicotera
Lausitz University of Applied Sciences, Germany
ippolita@studioeu.net

Elisa Serra
Leibniz Universität Hannover, Germany
elisa.serra@freiraum.uni-hannover.de

The authors of this article are members of the interdisciplinary team, which initiated and coordinates the project "Landscape Choreography."

landscape choreography / interdisciplinary approach / participatory construction / performative action / shared space

Landscape Choreography, Taranto. (Photo by Franceso Giusto)

CONTENT

Landscape Choreography is an interdisciplinary research project financed by the European Culture Program, which involves partners from three European countries/cities: Italy/Taranto, Germany/Cottbus and Romania/Cluj-Napoca.

Starting from the observation of citizen's spontaneous activities and needs of re-appropriation of unused or degraded urban public spaces, the project provides resources, languages and skills to meet these needs, suggests and fosters solutions, and finally creates an international network of subjects that share such needs.

Landscape Choreography encourages a new European culture of public spaces through its interdisciplinary approach that integrate socio-anthropological analysis, landscape architecture, performing art, and public art. Landscape Choreography is also promoting an exchange of experiences within the European community through the sharing of practices and proposals for the recovery of urban spaces.

Through the activation of public debates, permanent laboratories, participatory construction and performative actions as a work method, a new culture of shared space spaces will be developed.

The project lasts twenty-four months and is divided into five phases, which ideally refer to the agriculture cycle: to dig up, to seed, to maintain, to crop, to continue. Metaphorically, the natural cycle structures the changes and re-appropriation of the public spaces.

AIMS

General objective:

- to contribute to a new European culture of public spaces, developing creative practices based on the idea of the common good, fostering the trans-national circulation of shared experiences and making the cohabitation of different cultures and lifestyles possible
- to develop new interdisciplinary creative languages as well as new educational and professional tools

Specific objectives:

- to contribute to the planning and realization of new urban gardens and shared spaces in the cities involved
- to engage different users through artistic performances and comparative analysis in the anthropological and urban landscape field
- to initiate public events, trans-national circulation of experiences and a conclusive International Festival

Landscape Choreography aims to engage the citizen in the creation of new urban spaces through participative construction and to stage this process through art performances. The project's title emphasizes the value of this choreographic process: the actors will enter into a mutual physical relationship in order to cooperate at the creation of new urban landscapes. The involved partners participate at workshops in the selected countries spreading the outputs. The practice of spontaneous and creative use of abandoned public spaces inaugurates a virtuous cycle, which increases new forms of social and cultural cohabitation at European level. These peculiar social dynamics will be wide spreaded as examples of "best practices" and this would also constitute the Project European Added Value.

The ECLAS Conference represented an occasion to present topic and methodology of the research project, as well as the experiences developed with local actors and students from the participating countries in the first three phases of the project.

Further, the beneficial exchange of field research experience, practice and teaching should lead to discuss the landscape planning's new role in creating a new culture for the development of open space as well as new tools and planning instruments.

SUSTAINABILITY IN THE USE OF THE TERRITORY AND LANDSCAPE IN THE MUNICIPALITY OF MONCHIQUE (ALGARVE, PORTUGAL)

Tiago Filipe Santana Águas
Algarve University, Portugal
tiagofsaguas@gmail.com
Carla Maria Rolo Antunes

sustainability / bioengineering /
river system / requalification / biodiversity

Barranco of Pisões. (Photo by Tiago Águas)

Landscape interventions shall respect the place, taking the genius loci into account. The understanding of the spirit of a place is fundamental, both for minimizing the impacts as for perpetuating identity.

River systems are sensitive ecosystems with high biodiversity and diverse functions (hydrologic, hydraulic, ecological, environmental, economic, landscape, and social). The river corridors are structuring elements of the landscape, promoting the connection in the territory, therefore it is important to encourage actions for conservation and restoration of these elements, as well as the improvement of ecological conditions in order to elevate biodiversity (FISRWG 1998). Interventions in watercourses shall consider results of global and integrated approaches that promote recovery planning and watershed through measures, works and other appropriate means.

In this context, for a case study at the site of the Barranco of Pisões, by the river Seixe, in the municipality of Monchique a set of interventions by interdisciplinary nature were recommended, involving people and establishing connections between the natural and cultural elements existing in the study area (McHarg 1992).

The Barranco of Pisões has always been appreciated by the people of Monchique, not only for leisure, but also for the watercourse and the watermills associated with a local economy assuring a livelihood for the highland population.

In the presented study the characteristics and potentials of the place were analyzed. Due to the importance of the fluvial corridor it was fundamental to develop a proposal offering a sustainable use for this place. The study targets to retain the dynamics of the river system by using bioengineering techniques, to create inviting spaces, improve accessibility, and establish new connection and to found an educational center informing about dynamics of mountain streams. The integration and articulation of these aspects will enhance, stimulate, and accelerate the process of requalification of the landscape and thereby will contribute to a sustainable development of the place (Aguas 2013). To guarantee the success of the proposed interventions a cost estimation was made.

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CIDADE ARACY, A NEIGHBORHOOD IS REINVENTING PLACES

Luciana Martins Bongiovanni Schenk

Universidade de São Paulo

Instituto de Arquitetura e Urbanismo, Brazil

lucianas@sc.usp.br

public open spaces / leisure areas and peri-phery / urbanization in fragile environments

Children and Streets, an open space for invention. (Photo by Luciana Martins Bongiovanni Schenk)

Cidade Aracy is the name of a neighborhood located in the outskirts of São Carlos, a city of 221,936 inhabitants, 236 kilometers far from São Paulo, Brazil. This neighborhood was planned and constructed by private investors for the working class, in a form of small lots, lacking infrastructure and far from any center. There was a conflict between the federal environmental laws and the situation of the project: it has been located over a part of an important aquifer, a fragile area that should not be occupied. The project for Cidade Aracy in 1980 presented avenues, streets, blocks and open spaces dedicated to future squares and institutional areas. Nowadays, and in spite of the geographical segregation caused by the landscape configuration presented by a large valley between the city and the Cidade Aracy neighborhood, it is a very populated and alive place. The question that guided the present investigation is how many of the planned leisure areas are actually used by the population and, like a counterpart, what places were elected by the same population for gathering and leisure. This presentation deals with the methodology based on photography and proposed to reveal the resistances and adaptations made by the population.

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MAKING PLACES IN 1:1: SITE SPECIFICITY AND LOCAL TRANSFORMATIONS THROUGH TEMPORARY PROJECTS

Bettina Lamm

Landscape Architecture and Planning
University of Copenhagen, Denmark
bela@life.ku.dk

public space / temporary use / co-creation /
production / aesthetics / user involvement

LOD67, Amager Copenhagen: Landscape architecture students from the University of Copenhagen built new installations at the former warehouse parking lot attempting to transform the site from that of industry into a living playful public place. (Photo by Bettina Lamm)

At the University of Copenhagen we have been engaged in practice-based research projects. We explore methods of creating new public domains through making and building temporary small-scale spaces in 1:1 in close collaboration with local site and communities.

These projects have emerged at abandoned and seemingly unused sites suggesting alternative adaptions and possibilities of places for public or communal use. The aim is to investigate if and how relatively low budgets and simple physical alterations can set transformations in motion reprogramming and redirecting the discourse of a place.

Through the notion of site specificity as introduced by Miwon Kwoon, cases are explored in relation to its physical environment, site discourse, and the social context. This entails local users and resources, physical settings and the legislative and political situation surrounding a site and recording how all this changes when even small scale transformative processes are set in motion. The drafting table was replaced by a strong presence on site developing projects in an almost hand crafted process that allowed for adaptions and alterations to be made in the moment. Initially the methods came out of monetary budget restraints that

made it vital to engage all possible resources. However through the process we realized that the method had advantages and interesting implications for the design process, the site context and for creating community capacity.

What emerged also revealed how seemingly "innocent" site alterations can both stir the legislative system and be transformative.

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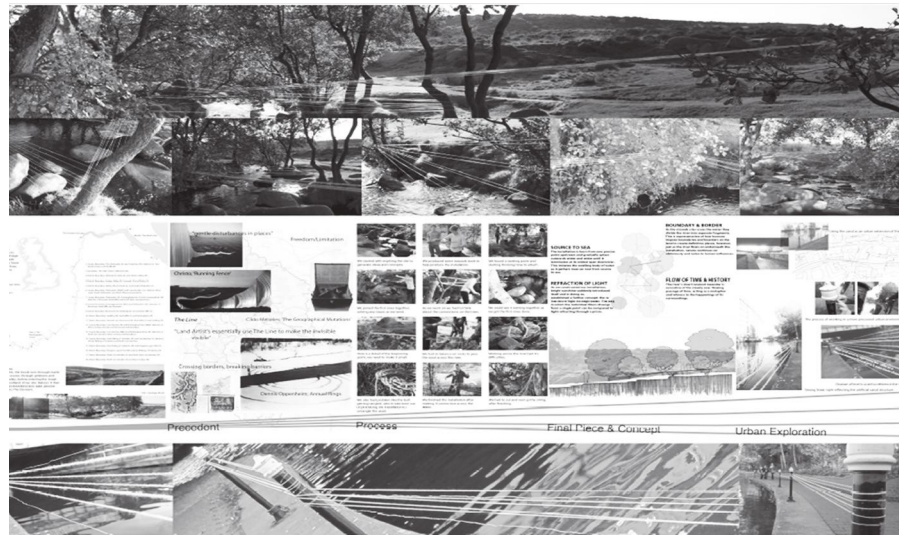
LANDSCAPE AND ARCHITECTURE: A LANDSCAPE SPECIFIC APPROACH TO ARCHITECTURAL DESIGN EDUCATION

Nicole Marie Porter

University of Nottingham, United Kingdom

Nicole.Porter@nottingham.ac.uk

*architecture / pedagogy /
landscape installation / UK*

Student project presentation panels, *Borders and Boundaries* landscape installation, by Jessica Wallis, Jake Rathbone, Melody Blundy, Rosie O'Neill, and Matthew Beaumont, University of Nottingham, 2012.

What does it mean to design architecture in response to landscape and how can this be taught? In the "landscape interpretations/ ecological explorations" project (2011 and 2012), second and third year architecture students explored this question by creating on-site artworks which addressed the complex cultural, economic and social qualities of the Peak District National Park, UK. Underpinning this project was the notion that sustainable architecture must be grounded in a holistic and multidisciplinary understanding of landscape, and that this demands a creative/intuitive as well as technical/informed engagement with place. In 2012, the project was recognized by EDUCATE (Environmental Design in University Curricula and Architectural Training in Europe), gaining equal first in the "Educate Prize" (open student category), a prize established "to reward the implementation of sustainability in the education of future generations of professionals of the built environment."

In this presentation, the process and outcomes of the "landscape interpretations" design studio exercise are presented. The four week project included a short series of in-studio exercises and research; a site visit to the Peak where students working in groups of five had two hours to locate, create and record their own landscape installation pieces (artworks); and a follow up week to reflect, extend and re-present their on-site work as a studio presentation. The brief was intentionally non-prescriptive to allow groups to develop their own specific themes and concepts. Use of a range of media and methods was encouraged.

The diverse range of student artworks that resulted included films, on-site and studio sculptures, mappings, drawings, and soundscapes. These works creatively explored multiple relationships; between the natural and the cultural, landscape and architecture, urban and non-urban, process and product, past and present, boundary and transition, economy and environment, physical spaces and imagined places, experience and expression, perception and action. Students produced site-specific projects of conceptual clarity, intellectual depth and poetic beauty, identifying and giving expression to specific themes including scale (where do site impacts begin and end?), recycling, and the role of water as an environmental, cultural and economic resource. Within a short period of time, students acquired important skills in group work, conceptual thinking, decision-making, time management, communication, and design presentation. As young architects, their attitudes were transformed from those primarily based on landscape-as-nature and inert scenery to one where the complexities of landscape modification, hybridity, process, and eidetic engagement were recognized. This went on to inform their subsequent building design projects, as they developed architectural propositions where landscape was central to both the form and programmatic content of their works. This exploratory project has set the foundation for students to creatively approach site interpretation and intervention, to know "the site" in a variety of ways, and to conceptualize architecture as part of a wider system of natural and cultural processes.

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EDUCATE (Environmental Design in University Curricula and Architectural Training in Europe) web portal, http://www.educate-sustainability.eu/prize) [accessed September 2013].

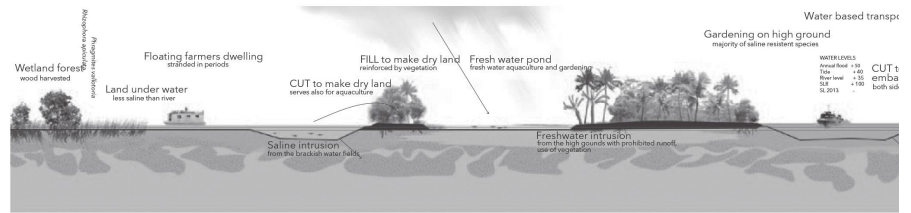# BACK FROM PLANNING TO PLANTING: CA MAU'S NEED TO SHIFT GEARS TO RESPOND TO CLIMATE CHANGE

Kelly Shannon

The Oslo School of Architecture and Design—
AHO, Norway, Institute of Urbanism & Landscape
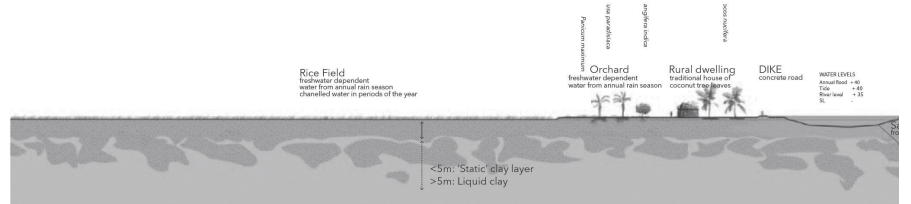*kelly.shannon@aho.no*

Bruno De Meulder

University of Leuven, Belgium
bruno.demeulder@isro.kuleuven.be

Ca Mau / climate change / lowland /
mangrove / Vietnam

2030

2013

Profiling the Countryside
Reprofiling—always in respect of maintaining a cut-and-fill balance—is a key in the strategy to adapt to climate change. It can transform the territory of the Mekong Delta by developing new sections. The wetness and soil conditions recreated by section operation could be systematically exploited by replanting forests and mangroves. (Image by Per Fredrik Blom/RUA)

Ca Mau is situated in one of the lowest "lowlands" in the world (0.5-1.3 meters). Two massive mangrove forests that historically reached to the city—a freshwater mangrove along the Gulf of Thailand and a salt-water mangrove, at the southernmost tip of the country protect it. Agricultural development (from rice to fish and more recently, massive shrimp-farming), urbanization and now industrialization (oil and gas extracted from the sea, fertilizer, fish processing) have dramatically reduced size as well as condition of the mangrove ecosystem.

The domestication process in the Ca Mau peninsula has been one of manipulating topographies, simultaneously bringing fresh water from the Mekong Delta and draining the swamplands through a complex, incrementally realized, canal network that interacts and transforms the natural river and creek system. This sophisticated water system, generated by internal colonization in the seventeenth century and later French colonization, produced Vietnam's "rice basket." Canal construction involved a cut and fill process and generated an entire range of micro-topographies, mostly with linear elements—some elements were mobile (in relation with paddy fields), while other elements were fixed. The main factor that determined differentiation in the territory was the (often temporary) position in a long gradient of wetness. Mangroves and forests organically infiltrated areas in-between water and land and saturated, by their presence, production and reproduction of material, created a cyclical process of land making. Domestication and colonization of the landscape exchanged this gradual transition between water and land, with mangroves in-between, for a categorical division between dry and wet. The introduction of elements such as canals, dikes and ditches eliminated this gradient. Whereas mangroves mediated between land and water (while gradually "making" land), planted trees today fix higher elements of topography.

The foundational paradigm of land management in the peninsula is undergoing a fundamental shift. Living patterns anchored on floods and interconnected water systems are distorted. Dam building by Vietnam's neighbors heavily disturbs the flow regime of the Mekong River. Water pressures consequently shift so that coupled with sea-level rise, saline intrusion is threatening enormous territories. Large sea dikes are envisioned (in an area that previously thrived from the natural processes of erosion and sedimentation), while local farmers massively jump on the lucrative opportunity that salination offers: shrimp-farming. Paddy fields systematically turn into shrimp ponds. Trees are systematically cut because they "pollute" the harvest.

One wonders whether this is, once again, a *deus ex machina* demonstration of the resilience, flexibility and ingenuity of local farmers to rapidly adapt to dramatically changing conditions—the next textbook case for James Scott (Scott 1998)—or whether one is heading to a major ecological, economic, and social catastrophe?

The contribution sketches how, based on a meticulous documentation of remaining traces, soil and water conditions and while guiding the further territorial development, a resilient forest structure can be interwoven—giving a new form and content to the notion of mangroves—in this extremely productive landscape, that prepares the territory for climate change while strengthening the quality and identity of the urban structure and its impressive hinterland, the day-by-day growing mosaic waterscape.

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THE ROSE SQUARE—THE CENTER OF LIEPĀJA CITY

Silvija Ozola

Riga Technical University, Latvia

ozola.silvija@inbox.lv

environment / identity / landscape architecture / rose plants / specific influence

Liepaja, Rose Square after 1935. (Photo taken from Postcard Collection of Vera Gubina)

Liepāja as an industrial, commercial and resort city flourished at the end of the nineteenth century and the beginning of the twentieth century, thus promoting the development of architecture and garden art. Liepāja's health resort contributed to the improvement of city planning. Parks, gardens, avenues, and squares formed the greenery system of Liepāja City. The layout of Liepāja's center, which was formed around 1867, remained without significant changes until 1881, when complexes of high-rise buildings had replaced unattractive, low buildings. Around the New Market Square, where six streets came together, a multifunctional center was formed. The New Market had a triangular shape. Complexes of buildings created an architecturally unified building area in thecity center. After building the electric street railway in 1899 the New Market square became the main traffic center of motorways and the dominant place in Liepāja. The Liepāja City Council took a decision on closing the New Market. In 1911 the New Market Square was transformed into the Rose Square. Twelve wooden benches, separated by intervals of fifteen hornbeams, surrounded the big circle of the walking trail. The Lawn was decorated

with pink and white floral rug ornaments. From the large walking trail circles three radial direction walkways led to the nearby streets. Along the perimeter of Rose Square trees and low shrub hedges were planted. The most typical types of plantings of that time—trees in groups and flower borders, carpet bedding and arabesques or lawn ornaments, as well as mosaics on the well-tended velvety green grass background—were used for creating the visual image of the Rose Square.

Brilliant russian tsarist engineers and architects from St. Petersburg were involved in the construction of the Navy Town of Liepāja. The resort area and the city center was designed by architects and landscape artists from Brandenburg. The visual image of Liepāja City center was formed through the interaction of two cultures and it reflected the latest European architectural trends in city environment design of the corresponding period. An important role was assigned to greenery and landscape. The Rose Square became the symbol of Liepāja.

Liepāja City center was reconstructed in 1970 and the original planning composition of the Rose Square was restored. However, there has been no research on the original

intent and design of the Rose Square, the original selection of plantings, and the authors of the project.

The aim of the research: to analyze the green plantation planning and its impact on the visual image of Liepāja City center, as well as the architectural and the spatial composition of the Rose Square before the Second World War.

The main results: this research provides valuable information for future local territorial development plans, focusing attention on cultural values and identity.

Material and methods: the study is based on research and analysis of cartographic, archive, and photo materials, as well as on a comparison of the use of rose plantations in German cities and Liepāja in the corresponding era.

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IN THE REALM OF THE SENSES—URBAN SPACE AND IMAGINATION

Robin Winogrond

Robin Winogrond Landschaftsarchitekten, Switzerland

mail@winogrond.com

identity / genius loci / atmosphere / experience / perception

Wildwood Plaza, watching the forest. (Photo by Daniela Valentini)

"Dabei ist es von Bedeutung, dass Atmosphäre etwas zwischen Subjekt und Objekt ist, nämlich ihre gemeinsame Wirkung." Gernot Böhme

The lecture, held recently in similar form at the Faculty of Urbanism, University Pontificia Bolivariana in Medellin, Columbia, presents a spectrum of our built urban landscape projects in Switzerland and Germany. The designs investigate urban landscape as a dialogue between the identity of place and the persons experiencing that place, searching to create potent, site specific spaces which engage the imagination of the user and encourage the unfolding of social interaction. The designs synthesize and juxtapose an interpreted reading of the site and the specific social uses and users of that site to form a coherent, new entity. The projects and their process reflect the interdisciplinary background of Robin Winogrond: urban design, landscape architecture and art.

The lecture begins with an introduction to the approach in creating these projects. Based in the tradition of the poetics of urban architectural space qualities of landscape space such as atmosphere, ground plane as catalyst of a sense of movement, non-hierarchical space, and "open-ended stories" are instrumentalized to create a strong experience of the particular place. In the context of our highly technological, hectic urban lifestyle the spaces invite the user to experience space as part of their own physical and phenomenological realm of perception. The world of the senses, experiential space, kinesthetic movement through this space, and the haptic world of atmosphere are used to express the site. The users and their needs play an equally significant role, bute are, however, conceptually designed to melt spatially and optically into the overriding atmosphere. Within this overriding sensation the widest possible range of functions for a widest possible array of users is integrated. To this goal, design elements such as water, seating or play, express the specific design language of each site.

Out of this approach emerges, for example, the design Cantonal High School Wil as a "Landscape Lounge," explicitly juxtaposing the sites history as a gravel quarry with teenager behavior in open space. The concept of a grove of trees in Central Plaza Katzenbach transforms the surrounding tree groves into a singular expression for the entire square—a space swimming within the repeating trunk and leaf patterns of the tree crowns with their broken light and shadow. Within this dreamy framework a dense structure of uses are subtly offered. The presented approach is based upon the idea that one of the main program elements of urban open space is, and has throughout history been, such elusive goals as "joy," "letting go," or "drifting," be it via sports, social convergence, voyeurism, observing the passing of time or the simple but elemental physical act of strolling through unbuilt space. The experiential aspect of landscape architecture is central to our profession yet seldom spoken about on concrete terms. The presented projects and considerations serve as a plea for an experiential approach to urban landscape as a dialogue between the identity of place and user.

WETLAND BIODIVERSITY PROMOTION. CASE OF STUDY: ÖSTRA DAMMEN, LOMMA, SWEDEN

Inês Vasconcelos Luís
Faculty of Science of the University of Porto, Portugal
ines.vasc.luis@gmail.com

Paulo Farinha-Marques
Faculty of Science of the University of Porto, Portugal
pfmarque@fc.up.pt

urban biodiversity promotion / wetlands design / habitat creation / restoration and maintenance / human and wildlife interaction

Östra Dammen Lake, south to southwest view, June 2012. (Photo by Vasconcelos Inês Luís)

Wetland biodiversity promotion is a very relevant issue for landscape architecture, particularly in the design of spaces that conciliate recreational activities and the promotion of biodiversity. Landscape architects, habitat designers and planners have to find a well-balanced compromise between the presence and proximity of wildlife and human activities; an adequate gradient of access, recreation, shelter, visibility, and disturbance needs to be well-defined by the design proposal so that conservation in accessible green spaces may become a leading trend in contemporary urban contexts.

Design elements and principles of main wetland habitats are presented and discussed in the case study—Östra Dammen Reservoir, as well as the factors that determine the development and character of those habitats. Östra Dammen Reservoir is located in the Municipality of Lomma, Sweden and was subject to an integrated landscape design proposal based on the creation, restoration,
and maintenance of wildlife habitats. The landscape character of the area was studied and main problems identified, followed by the recommendation of intervention and maintenance actions. The overall proposal was developed combining the benefits of existing habitats and the introduced ones, articulated in a network of pathways that in selected areas allow the proximity between users and biodiversity. The most relevant results indicate a few strategies to promote biodiversity, minimizing conflicts, and enhancing ecological and aesthetic benefits. It indicates the importance of edge/ecotone manipulation and habitat creation based on the manipulation of land grading (different heights, slopes, mounds, depressions) and the establishment of different types of floristic compositions and vegetation structure. It was also important to consolidate the idea that naturalistic habitat design has both interest for human and wildlife in a new context of proximity and positive interaction.

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ALLOTMENT GARDENS—THE IMPORTANT ELEMENT OF NATURAL AND SOCIAL PERFORMANCE OF CITIES
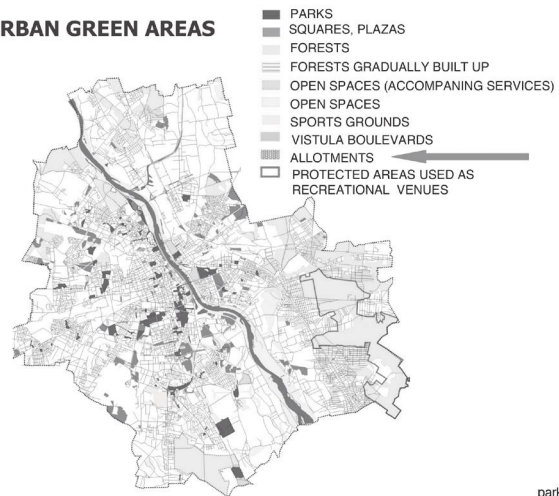
Gabriela Maksymiuk
Warsaw University of Life Sciences—SGGW, Poland
gabriela_maksymiuk@sggw.pl

Renata Giedych
Warsaw University of Life Sciences—SGGW, Poland
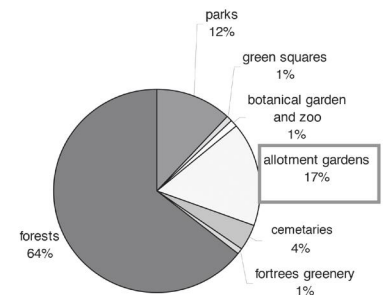renata_giedych@sggw.pl

green infrastructure / recreational preferences / allotment gardens

URBAN GREEN AREAS

PARKS
SQUARES, PLAZAS
FORESTS
FORESTS GRADUALLY BUILT UP
OPEN SPACES (ACCOMPANING SERVICES)
OPEN SPACES
SPORTS GROUNDS
VISTULA BOULEVARDS
ALLOTMENTS
PROTECTED AREAS USED AS RECREATIONAL VENUES

ALLOTMENT GARDENS DATA
1170 ha—total area of AG
176—numer of AG colonies
0,2 %—share of AG in Warsaw area

parks 12%
green squares 1%
botanical garden and zoo 1%
allotment gardens 17%
cemeteries 4%
fortrees greenery 1%
forests 64%

The land-use structure of Warsaw green areas with a particular focus on the allotment gardens

The history of allotment gardens in Poland dates back to 1897, when the first allotment garden, called "Sun Bath" was founded in city of Grudziądz. Nowadays in Poland, there are almost one million individual allotment plots with estimated number of users of four millions. Originally, the main purpose of allotment gardens was to provide citizens with land for cultivation of vegetables or fruits. As a matter of fact, for many years the allotment gardens played important an role in individual food production for city dwellers, so using today's terminology, we could call them elements of urban agriculture. The history of allotment gardens in Poland is inextricably connected with socialist political regime, as after the World War II, on behalf of Decree on allotment gardens, the responsibilities of their management were shifted to Central Management of Trade Union. The prospect or possibility of possessing the allotment garden was dependent on employment in public sector.

The new century brought the shift of discourses, which was the consequence of political and economic changes after 1989. The so-called "workers' allotment gardens" were changed into "family allotment gardens," and their major role moved from food production towards recreation and leisure. However, apart from their social role, their positive effect on functioning of environment within cities is spotted (e.g., their role in climatic, hydrologic, and biological functioning).

In June 2013 for two case study allotment gardens' colonies the monitoring of visitors was done. The method used was an overt observation followed by questionnaires. Subjects of the survey included: total number of users, age categories, type of usage of allotment gardens, frequency of visits and amount of time spent in allotment gardens, catchment area and users' preferences.

POSTER

SARA DEMIR
ONER DEMIREL

The important role of urban squares identity
*urban open spaces, visual symbols, identity
card, konak square, izmir/turkey example*

Karadeniz Teknik Üniversitesi
Trabzon-Adana, Turkey

DANIEL MATĚJKA
LUKÁŠ LATTENBERG
JANA ŽÁKOVÁ

Practical experience with conversion of
railway brownfields
Best practice landscape architecture

Mendel University, Faculty of Horticulture
Brno, Czech Republic

KRISTÝNA STARÁ

Landscape Perception
*Spatial Planning and European landscape
convention in Czech Republic*

CTU Prague, Faculty of Architecture
Prague, Czech Republic

ZUZANA AMBROZOVA

Awarded projects of landscape architecture in
the Czech Republic
Best practice landscape architecture

Mendel University
Brno, Czech Republic

BRUNO MARQUES
SIRLE SALMITSU
SULEV NURME

Creative Design Studios
*The challenges between teaching and public
engagement*

University of Technology, Tartu College of
Tallinn, Tartu, Estonia

BARBARA K. ADÁMKOVÁ

Contemporary private garden in the Czech
Republic
*a research of the most common types and
forms in relation to its designer*

Mendel University, Faculty of Horticulture
Department of Garden and Landscape
Architecture
Brno, Czech Republic

SABINE BOUCHE-PILLON
SÉBASTIAN BONTHOUX

Teaching urban ecology
*Participatory science experienced by landscape
architecture students trough a case study in
urban ecology*

UMR CNRS/CITERES
L'école Nationale Supérieure de la Nature et
du Paysage (ENSNP)
Blois, France

PARICHEHR GOODARZI
SHAGHAYEGH ROSHAN
MOHAMADHOSSEIN ALVAND

Who owns the landscape?
Inheritors of the landscape

University of Fine Art Tehran, Landscape
Architecture, Tehran, Iran

URSZULA FORCZEK-BRATANIEC

The force of natural succession in a landscape
*the application of visibility analysis for the
effective visual resource management*

Cracow University of Technology,
Landscape Architecture Institute
Cracow, Poland

ZUZANA AMBROZOVA

Small towns in the Czech Republic form the viewpoint by landscape architect
Best practice landscape architecture

Mendel University
Brno, Czech Republic

SARA DEMIR
ONER DEMIREL
M. AKIF ERDOGAN
MELIZ AKYOL

Altindere valley national park
natural and cultural landscape resources, analytical hierarchical process, visibility analysis, ecotourism

Karadeniz Teknik Üniversitesi
Trabzon-Adana, Turkey

CHANG CHIN-YU
CHEN HSIAO-HUI
HSU TSUI-FEN
HUANG YI-CHING

The evaluation of selecting the low-maintenance plants on outdoor vegetation wal in taichung city

Tung-Hai University, Department of
Landscape Architecture, Taiwan

CLAUDIO BERTELLI

What we talk when we talk about about water
or how I learned to start worrying and love the climate

HafenCity Universität Hamburg
Landscape Architecture
Hamburg, Germany

OLAF SCHROTH

Social acceptance of energy landscapes
social acceptability of renewable energy options in British Columbia's landscapes

University of Sheffield, Department of
Landscape
Sheffield, United Kingdom

JOZEF SEDLÁČEK
LENKA KULIŠŤÁKOVÁ

Complex by design. Rich by nature
How to deal with historic designed landscape in recent land use policies

Mendel University, Department of
Landscape Planning
Lednice na Moravě, Czech Republic

CATHERINE SZANTO
RITA OCCHIUTO

Towards a redefinition of the meaning of the landscape of Liége
proposal for a landscape experiment

University of Liége, Faculty of Architecture,
Research Unit "Ville-Territoire-Paysage"
Liége, Belgium

IRENE BITTNER

Active youth in urban open spaces
Urban open spaces and physical activities of the young–a case study in Vienna

University of Natural Resources and Life
Sciences | BOKU
Institute of Landscape Planning
Vienna, Austria

HALIL ÖZGÜNER
ZEYNEP AKGÜL GÖK
NESLIHAN YAŞAR YILMAZ

Conflicts between public and commercial use of sidewalks in urban areas: a case study of Isparta, Turkey

Süleyman Demirel University, Landscape
Architecture, Isparta, Turkey

KATARZYNA HODOR

Conduct model to restoration of historical gardens
Cultural heritage, model of conduct based on the concept of revalorisation of historical gardens in Cracow, southern Poland

Cracow University of Technology,
Institute of Landscape Architecture
Cracow, Poland

AGNIESZKA ANNA OLSZEWSKA

Meaning in the landscapes of contemplation
how to give significance by design

University of Porto, Faculty of Science
Porto, Portugal

PARICHEHR GOODARZI
ALI ASGHAR ADIBI
MOHAMADHOSSEIN ALVAND
ZAHRA GHOLAMI
AHMAD ALI FARZIN

The mutual landscape of pilgrimage landscape and natural landscape
the holy rivers' hidden landscape in the city of Tehran

Tehran University and Polytechnic University of Turin
Tehran and Turin, Iran and Italy

MAIJA JANKEVICA

Nature in the city
Comparison of determined landscape ecological aestehtics in different urban areas: case of Latvia

Latvia University of Latvia
Jelgava, Latvia

WOLFGANG NOVAK
ANASTASIOS ROIDIS

Topography of Shadow
An experiment study of shadow patterns on large scale terrains

ETH Zurich, Landscape Architecture
Zürich, Switzerland

IRENA ÜBLER

Descobrir Guimarãe—creative tourism
an urban signage project for the European Capital of Culture Guimarães 2012, Portugal

Descobrir Guimarães, European Capital of Culture Guimarães 2012
Guimarães, Portugal

CAMILLE MAHAN
LANA MERRILL
PAUL SICILIANO

Designing for Resilience
Reshaping Purdue University's Campus into an Ecologically Sound Future

Purdue University
Department of Horticulture & Landscape
West Lafayette, Indiana, USA

SUSANNE ISABEL YACOUB

Landscape taking new approach
film | hd | 14 min | statements about landscape architecture in a changing world in "Return of Landscape" by Akademie der Künste, Berlin 2010

Landschaftsarchitektur+video, in coopera-
tion with vista, Berlin, Germany

JĀNIS GRUNDBERGS
OZOLA SILVIJA
REINIS BAHS

Landscape specifics of Durbe town: the great achievement of little gardener
Best practice landscape architecture

Liepaja Regional Building Council, Latvia
Riga Technical University, Liepaja Branch, Latvia
Durbe Museum, Durbe Town, Latvia

SILVIA MINICHINO

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University of Florence,
Faculty of Architecture,
Florence, Italy

MADARA MARKOVA

Meaning of Latgale Upland everyday church landscape in development and growth of region and society

Latvia University of Latvia
Department of Architecture and Construc-
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NADYA KERIMOVA
VALERY NEFEDOV
MARIA MOROZOVA

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State Forest Technical University
& University of Architecture and Civil Engineering
Saint Petersburg, Russia

KELLEANN FOSTER

Expanding design education globally
What´s needed for an effective online studio environment?

Penn State University, Stuckeman School of Architecture and Landscape Architec-
ture, University Park, PA, USA

GIDEON SPANJAR
MARCO FACCHETTI
PETER R. HOBSON
SARUHAN MOSLER

The Shift
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Writtle College Writtle School of Design Centre for Econics and Ecosystem Manage-
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PANITA KARAMANEA

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Technical University of Crete, School of Architure Landscape Design, Greece

CHANG CHIN-YU
TSAI WAN-CHIEN
CHEN HSIAO-HUI

Attitudes of Park visitors towards Park Trees in Taiwan

Tung-Hai University, Department of Landscape Architecture, Taiwan

MOHAMMED MALLA MAHMOUD

The domination over nature
*Landscape phenomenological approach to-
ward understanding our relation with nature*

**University of Minho, School of Architure,
Guimarães, Portugal**

**ANNET KEMPENAAR
ADRI VAN DEN BRINK**

Design in the Planning Arena
*Regional design for the MHAL region,
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Aachen (DE), Liége (BE)*

**Wagening University, Landscape Architec-
ture, Wageningen, the Netherlands**

HUIRAN TANG

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*research based on contemporary landscape
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Technische Universität Berlin, Germany

YING LI

Public Open Spaces (POS) in China and the UK
*A comparison study of Design and assessment
of Public Open Spaces in Tianjin and London*

**University of Greenwich, Landscape and
Architecture Department, United Kingdom**

JÖRG SIEWEKE

Miss!ssippi
*Mapping the marginalized deltaic landscape of
southern Louisiana*

**University of Virginia/RWTH Aachen
Berlin/Charlottesville, VA
Germany/USA**

ANA VALLARINO KATZENSTEIN

Research Methodologies
*An innovative teaching experience—linking-
landscape, project and research*

**Udelar, Design laboratory
Montevideo, Uruguay**

ANTJE BRÜNING

Garden Tourism Southeast Europe?
*types of garden and open space heritage sites
in Southeast Europe for new cultural tourism
perspectives*

**Technische Universität Berlin, Institute
for Landscape Architecture and Environ-
mental Planning, Chair for Vegetation
Technique and Planting Design
Berlin, Germany**

**ZUZANA PŠENÁKOVÁ
INGRID BELČÁKOVÁ**

Specifics and landscape conditions of disper-
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a case of natural, historical and cultural heritage

**Slovak University of Technology
Department of Landscape Architecture
Bratislava, Slovakia**

**NAFISE SEYEDE
MARIEH MEHRANNEZHAD
SAMIRA MIVEHCHIAN**

Sustainable development of urban landscapes
*landscape designing as a tool into achieving
sustainable development*

**Tehran University
Landscape Architecture Department
Tehran, Iran**

ROELAND MEEK

Tidal landscape of the eemsdam
*the changing attitude of the dutch towards
water and nature*

**University van Hall Larenstein
Velp, Netherlands**

VENUE: ST. KATHARINEN

An integral part of this meeting was experimenting with a unusual and special location. Since the new University building was still under construction during the conference, we were looking for a long time for a suitable and dignified location. We were happy, when St. Katharinen offered us their generous space. The original church dates back to the thirteenth century and has gone through many changes since. It was the church for the lifely port area and symbolizes the openness and cosmopolitan spirit of Hamburg. We realized that this huge space could be experienced as a landscape that needed to be discovered and designed. In fact, students of the HCU prepared arranging the interior space of the church and could experience thereby a 1:1 planning.

UNIVERSITY CHURCH

The Hauptkirche St. Katharinen is one of the five central City Churches in Hamburg with the special function as University Church and church for the HafenCity. The foundation of St. Katharinen dates back to 1250 AD, when Hamburg expanded its borders to the south. Throughout the centuries, St. Katharinen became social and spiritual centre of an area, which changed from a rural to an urban space with high density. The growth of the congregation was harshly interrupted in the end of the nineteenth century, when Hamburg joined the customs Union of the German Reich. At that time, the baroque city south of the church was teared down and replaced by a customs free area with warehouses, the so called "Speicherstadt," behind a fence with customs control. About 20,000 people lost their homes then and had to leave the parish. In 1943 the bombings of World War II heavily destroyed St. Katharinen like vast parts of Hamburg. After the war the people of Hamburg re-erected the church as sign of peace, reconciliation and hope. However, right north of the church the Ost-West-Strasse was built like a city-highway through the heart of the city isolating St. Katharinen from the rest of town. In the 1990 the start of the HafenCity project brought St. Katharinen back on stage as active player in civil society and in the development of a merely business and harbour area to a mixed urban area with high density. Today, after the fundamental renovation of the church from 2007–2012, St. Katharinen presents a public space of unique historical, cultural, social, and spiritual quality for the City of Hamburg both with the church-square, the solemn and bright inner room of the church, and the restored historical organ. The church-tower is one of the most beautiful landmarks in skyline of Hamburg. St. Katharinen is raising her voice in the interdisciplinary debate on how to sustainably implement "peace and prosperity of the city" and it's people (Jeremiah 11). As University Church and church for HafenCity, St. Katharinen has been happy and proud to open her doors for the ECLAS Conference 2013 in Hamburg.

Frank Engelbrecht
Pastor

DESIGN COURSE

For the ECLAS Conference Hamburg, the Church of St. Catherine's became a place of exchange and encounter. Appropriating this sacred space with such a large, three-day event requires a good understanding of the church and its environment.
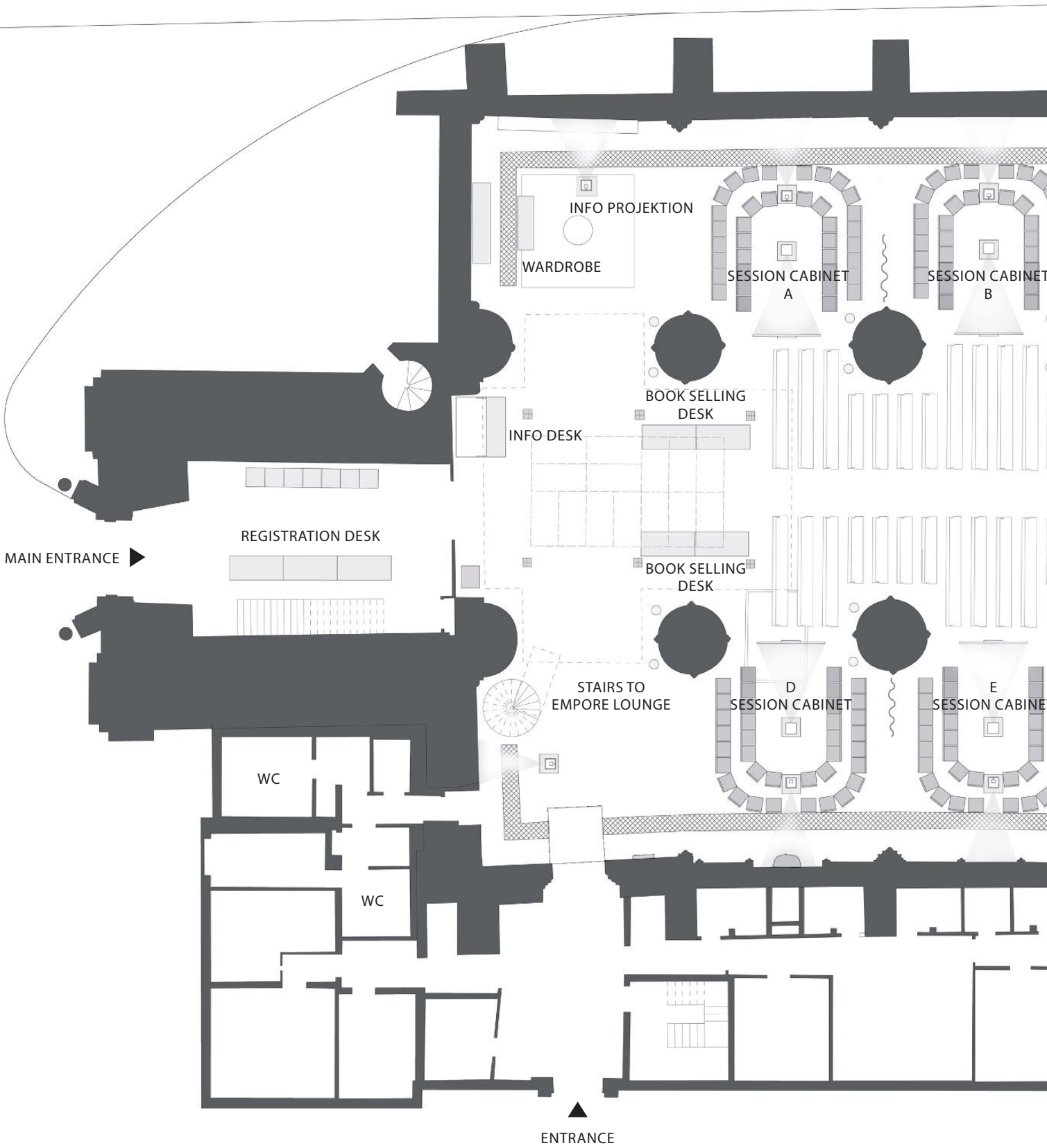
During the summer term, students in the design course worked on ideas for the spatial structure and design of the conference in the church. The design course dealt with Hamburg's city center and its developments from a drawing-based as well as theoretical perspective. Moreover, it also was the first time that the Urban Planning Department's students worked on a 1:1 scale or with the human experience of places and spaces.

The students collaboratively developed the concept of bringing the University Church of St. Catherine's to life as a church of the university. The workshop atmosphere of the university was transported into the church, but also other features. For example, HCU overhead projectors project topics and program of the conference onto the walls of the church. The projections accompany the conference participants in their discovery of the church's sequence of rooms.

The nave of the church can be seen after entering through the main entrance and the foyer. The core lectures, discussions, and film screening are held along the central axis. After passing through the central axis, you arrive at the spacious area in front of the side entrance. This is where we all eat together. In this open, spacious area, the choir section joins behind the altar. Where the space tapers is also where information becomes denser: the visitor walks through the "forest of posters" where projects, ideas, and concepts are densely displayed on compactly grouped presentation walls. The naves come together at the choir banister. This is where the five sessions are held, in symmetry with the central axis. Long, soft fabric hangs like stage curtains in the church bay forming a stage for the speakers. There is a work atmosphere similar here to that in the university. Visitors can easily switch from one session to the next along the wall of the church, and at the same time watch the projections on the opposite wall. Above the entrance area, is the "gallery of peace." The spatial structure of pedestals, covered with Persian carpets from the nearby warehouse district, offers a space for contemplation and concentration, as well as a generous view into the vastness of the interior of he church and the special ECLAS Conference.

Julia Erdmann
Guest Lecturer, Architect & Associate Partner, Stephen Williams Associates

INFO PROJEKTION

WARDROBE

SESSION CABINET
A

SESSION CABINET
B

BOOK SELLING
DESK

INFO DESK

REGISTRATION DESK

MAIN ENTRANCE ▶

BOOK SELLING
DESK

STAIRS TO
EMPORE LOUNGE

D
SESSION CABINET

E
SESSION CABINET

WC

WC

ENTRANCE ▲

20m

10m

5m

1m

Nord

SESSION CABINET
C

PUBLICATION DESK

POSTER FORREST

PECHA KUCHA SESSION

KEYNOTE LECTURE

POSTER FORREST

LUNCH TABLE

LUNCH TABLE

LUNCH TABLE

LUNCH TABLE

KIRCHHOF

ACKNOWLEDGEMENT

SCIENTIFIC COMMITTEE

Simon Bell EstonianUniversity of Life Sciences, Estonia
Annette Bögle HafenCity University, Germany
Diedrich Bruns Kassel University, Germany
Angelus Eisinger Regional Planning Zurich, Switzerland
Ellen Fetzer Nürtingen-Geislingen University, Germany
Karsten Jørgensen Norwegian University of Life Sciences, Norway
Uli Hellweg International Building Exhibition Hamburg, Germany
Elke Krasny Vienna, Austria Eckart Lange University of Sheffield, Great Britain
Karoline Liedtke HafenCity University, Germany
Ullrich Schwarz HafenCity University, Germany
Jorg Sieweke University of Virginia, United States of America
Christiane Sörensen HafenCity University, Germany
Joachim Thiel HafenCity University, Germany
Michaela Ott University of Fine Arts of Hamburg, Germany
Udo Weilacher Technical University Munich, Germany

REVIEWERS

Simon Bell Estonian University of Life Sciences, Estonia
Bernadette Blanchon École Nationale Supérieure du Paysage Versailles-Marseille, France
Annette Bögle HafenCity Universität, Germany
Hanna Bornholdt Ministry of Urban Development and Environment, BSU, Germany
Sabine Bouche-Pillon École Nationale Supérieure de la Nature et du Paysage Blois, France
Jacqueline Bowring Lincoln University, New Zealand
Adri von den Brink Wageningen University, The Netherlands
Marlies Brinkhuijsen Wageningen University, The Netherlands
Diedrich Bruns Kassel University, Germany
Erik A. de Jong University of Amsterdam, The Netherlands
Alessandro De Masi Politecnico di Milano, Italy
Jeroen de Vries Van Hall Larenstein, The Netherlands
Tim Delshammar Swedish University of Agricultural Sciences, Sweden
Angelus Eisinger Regional Planning Zurich, Switzerland
Margaret Elen Deming University of Illinois, United States of America
Thilo Folkerts 100 Landschaftsarchitektur, Germany
Enrico Fontanari IUAV di Venezia, Italy
Kamni Gill University of Sheffield, United Kingdom
Karsten Jørgensen Norwegian University of Life Sciences, Norway
Jörg Knieling HafenCity University Hamburg, Germany
Friedrich Kuhlmann Estonian University of Life Sciences, Estonia
Harlind Libbrecht University College Ghent, Belgium
Karoline Liedtke HafenCity University, Germany
Gabriela Maksymiuk Warsaw University of Life Sciences, Poland
Sophia Meeres University College Dublin, Ireland
Rosalea Monacella Royal Melbourne Institute of Technology, Australia
Bruno Notteboom Ghent University, Belgium
Michaela Ott University of Fine Arts of Hamburg, Germany
Martin Prominski Leibniz University of Hanover, Germany
Jörg Rekittke National University of Singapore, Singapore
Bianca Maria Rinaldi University of Camerino, Italy
Paul Ronck en Wageningen University, The Netherlands
Sören Schöbel Technical University of Munich, Germany
Ullrich Schwarz HafenCity University Hamburg, Germany
Kelly Shannon The Oslo School of Architecture and Design, Norway
Christiane Sörensen HafenCity University, Germany
Sven Stremke Wageningen University, The Netherlands
Joachim Thiel HafenCity University Hamburg, Germany
Sirpa Törrönen Aalto University School of Arts and Design, Finland
Anna Viader Städtebau Architektur Landschaft, Germany

specties